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MAR 74 J K BIDWELL N00604-74-C-0234
UNCLASSIFIED 1620-01-1-1290 NL

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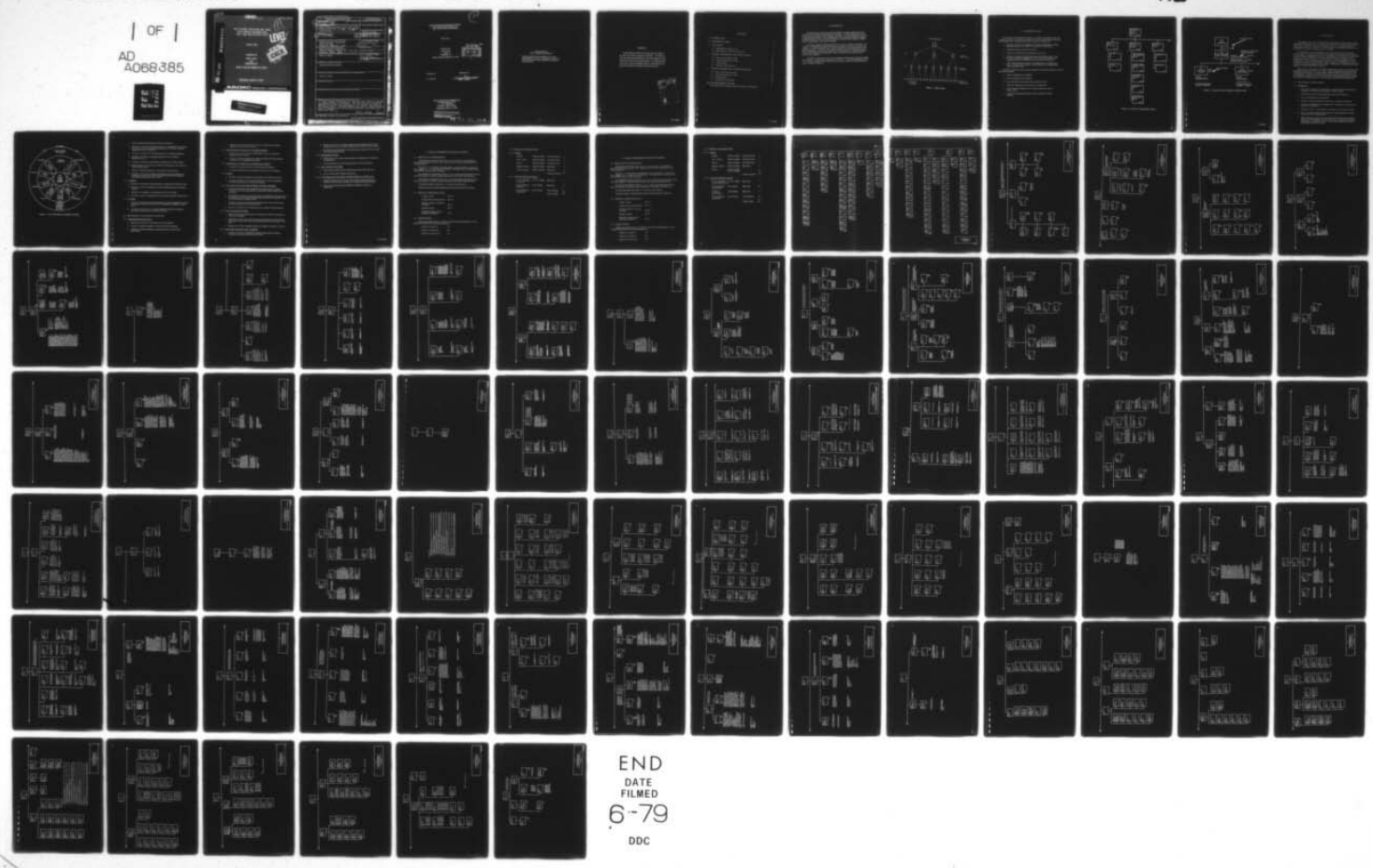

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SHIP SYSTEMS DEFINITION AND INDEX (EIC STAGING DIAGRAMS) FOR ARS-7 AND ARS-38 CLASS SHIPS

March 1974

Prepared for

PERA (CSS)
and
COMSERVPAC

Under Contract N00604-74-C-0234

Publication 1620-01-1-1290

ARINC RESEARCH CORPORATION

SECURITY CLASSIFICATION OF THIS PAGE *(When Data Entered)*

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A Ship Systems Definition and Index for Navy Ships of the ARS-7 and ARS-38 classes is presented. The SSDI consists of Equipment Identification Code (EIC) diagrams of the systems that make up the subject ships. The SSDI provides an orderly, common-language means of communication for all Navy activities associated with these ship types.

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March 1974

Prepared for

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Prepared by

J.K. Bidwell

Approved by

Max C. Duncan

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P.O. Box 3290
Honolulu, Hawaii 96801

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ABSTRACT

A Ship Systems Definition and Index for Navy ships of the ARS-7 and ARS-38 classes is presented. The SSDI consists of Equipment Identification Code (EIC) diagrams of the systems that make up the subject ships. The SSDI provides an orderly, common-language means of communication for all Navy activities associated with these ship types.

CONTENTS

1. INTRODUCTION

The Ship Systems Definition and Index (SSDI) is an orderly identification and structuring of the systems that make up a total ship. The SSDI defines the systems as well as their boundaries and interfaces, creating a common language for communicating information about a ship's configuration. In providing this common language, the SSDI is useful to all Navy activities involved in the life-cycle operation, maintenance, modernization, and support of a ship.

The SSDI is organized and formatted so as to serve a variety of purposes. For example, the diagrams and supporting narrative identify all systems – but only those systems – in an individual ship class. Thus they provide a basic framework for performing inventory. In addition, the diagrams identify system boundaries and interfaces, making them useful in planning repairs and alterations, in training shipboard personnel in operation and maintenance, and in a number of other ways (see Section 3, "Uses of SSDI").

The SSDI is structured such that the summation of SSDI items at any level defines the total ship. This principle is illustrated in Figure 1. An actual application of Figure 1, showing a typical ship breakdown from the major system to the sub-subsystem level, is shown in Figure 2.

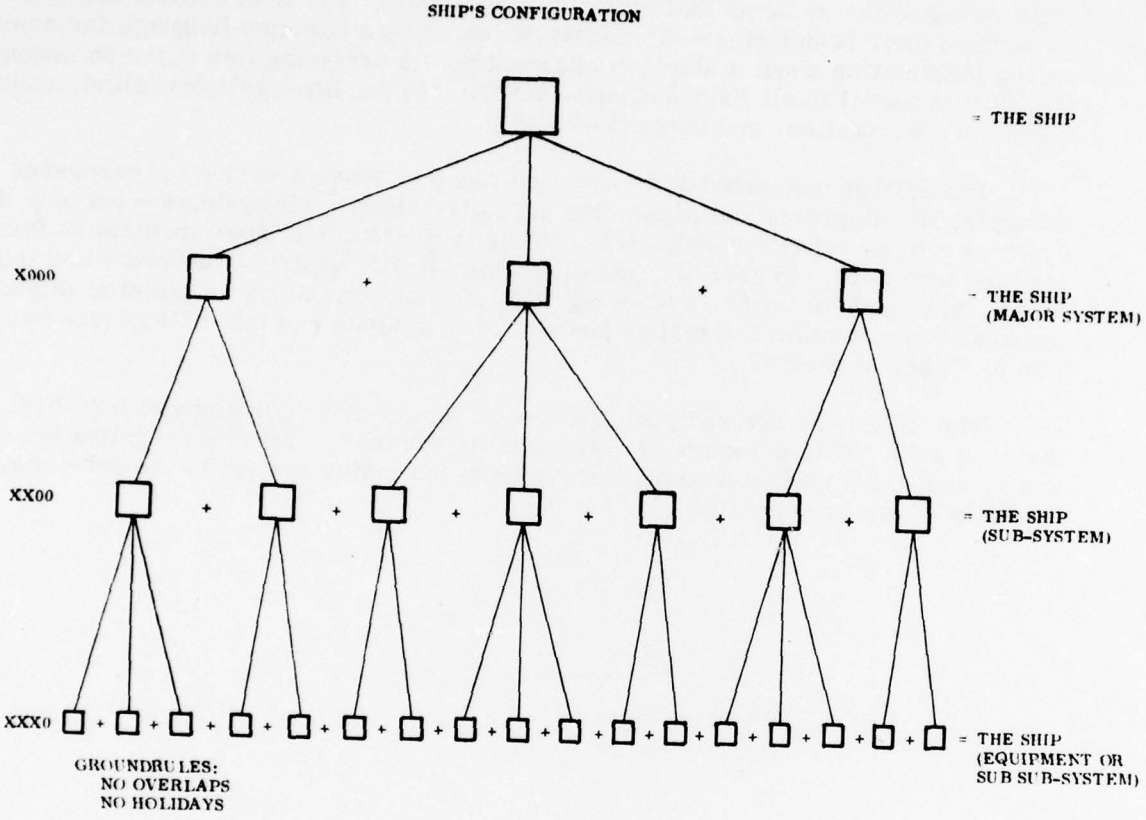


Figure 1. SSDI Concept

2. PROPERTIES OF SSDI

The Ship Systems Definition and Index is an orderly description of the total systems in a ship. As illustrated by Figure 2, a typical ship breakdown from the major system to the sub-subsystem level, the SSDI is structured to:

a. Provide a multi-level breakdown of the ship's configuration, thereby providing visibility and control at any desired level of detail.

b. Completely define the ship at each level.

c. Contain no redundancies in its definition of the ship.

d. Utilize the Equipment Identification Code (EIC) Master Index. This provides a standard language based on the same nomenclature and coding system that is mandatory for use on a Navy-wide basis.

e. Tailor the EIC Master Index for the configuration of a specific ship class. The ship class diagram is then tailored to the configuration of each individual ship.

The SSDI comprises various system diagrams (as depicted by Figure 3) with the following properties:

a. System equipments are identified.

b. System boundaries are identified.

c. Key maintenance items within each system are listed.

d. Shipboard maintenance work centers are referenced.

e. Level of system definition is as currently defined by the EIC Master Index.

f. Vehicle for displaying systems to greater detail for specific purposes.

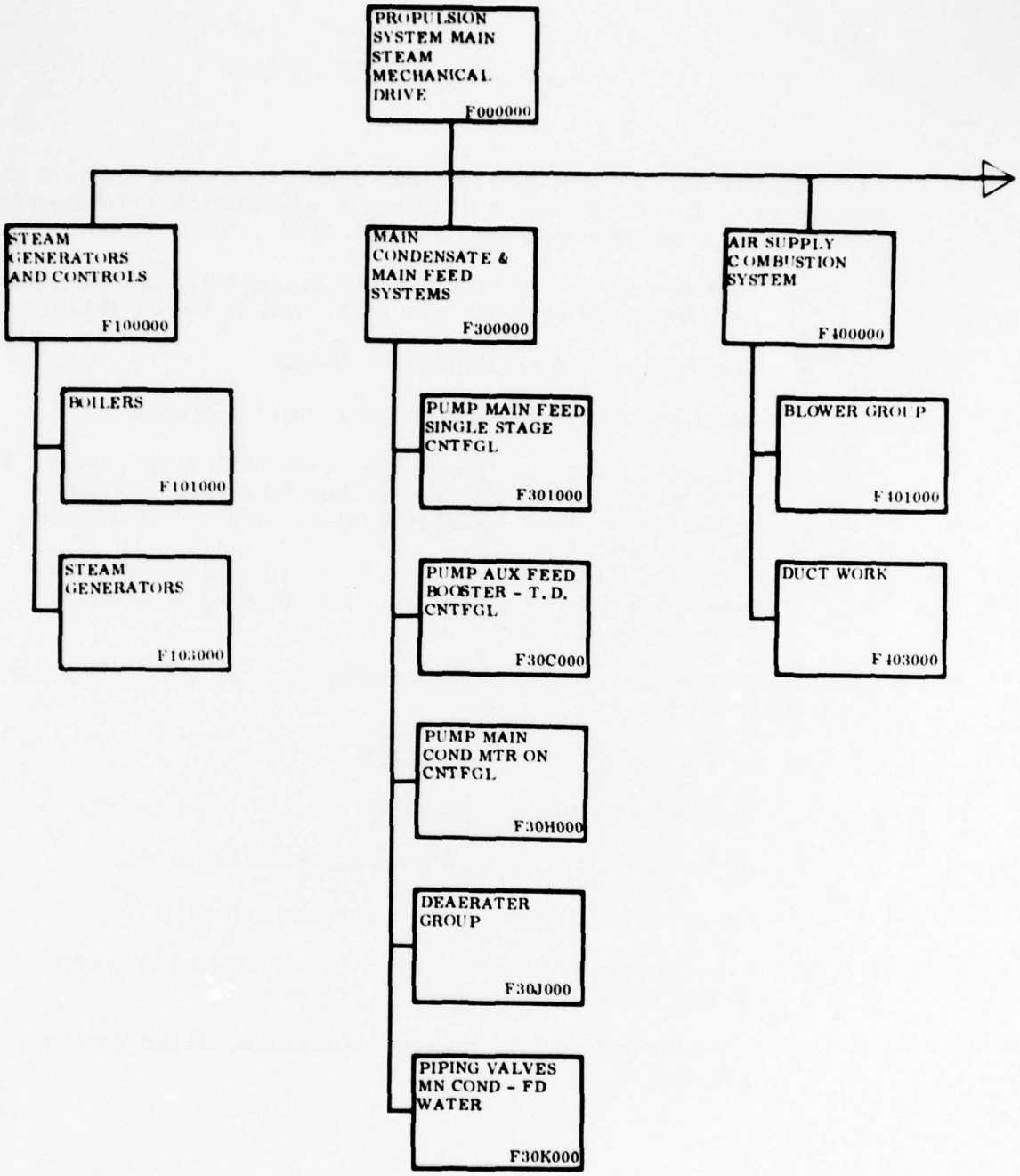


Figure 2. Portion of a Typical Ship's System

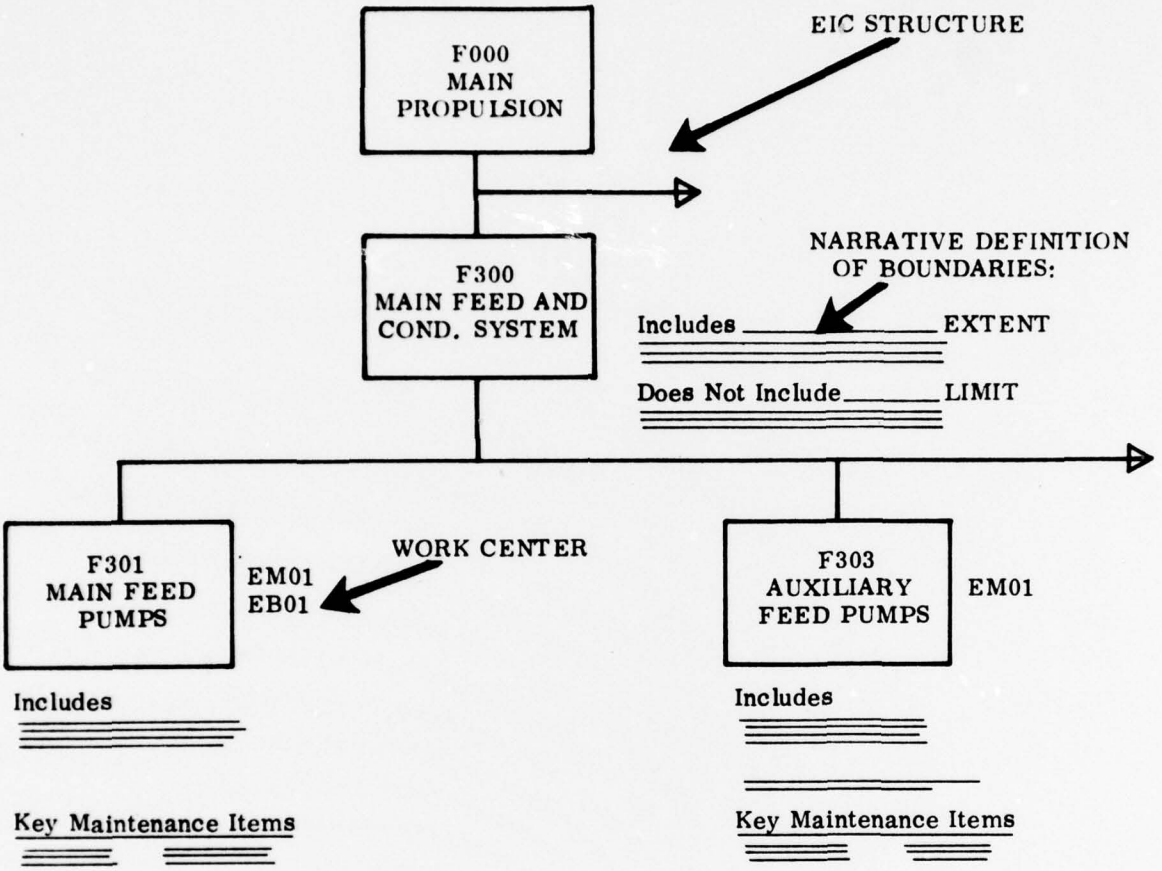


Figure 3. Example of System Diagrams Included in SSDI

3. USES OF SSDI

Throughout a ship's life, ship's force personnel submit a vast amount of system, equipment, and parts information to their Type Commander and Fleet Support activities. Requests for alteration, reports of maintenance action, work requests, and parts requisitions are but a few examples. In each instance the submitted information must be related to a specific, definable portion of the ship.

In carrying out their responsibilities, the Type Commander and the support activities must not only identify a specific item within the total ship, but also be aware of its interfaces. In planning alterations or modifications, for example, the Technical Systems Commands (NAVSHIPS, NAVORD, NAVELEX, NAVAIR) must be able to identify the various systems that will be affected by a particular change to a ship's configuration. Also, when preparing for overhaul or other availabilities, the Type Commander and repair activities must be able to organize a work package on the basis of specific as well as interrelated ship systems. This is done to ensure that the work package is complete and defined effectively.

Since so many activities are involved in supporting the ship, it is necessary that both ship and support personnel use a single, uniform language when communicating configuration information. The Ship Systems Definition and Index provides this common language by describing a specific ship in terms common to all ships of the fleet. As illustrated in Figure 4, it is a means of communicating information about a ship in a way that can be understood by all. Potential uses of the SSDI are outlined below.

3.1 SSDI SUPPORT TO SHIP'S FORCE

3.1.1 Maintenance

a. Serves as a checklist for conducting pre- and post-repair inspections and updating the Current Ship's Maintenance Project (CSMP).

b. Provides the basis for comparing repair items with alterations.

c. Aids in establishing repair priorities.

d. Assists in identifying shipyard, ship's force, and tender interfaces.

e. Assists in making manpower assignments by ensuring that all systems of the ship are considered.

f. Aids ship's force in "buttoning up" all systems for post-repair testing.

g. Aids in alteration planning and analysis by showing possible interfaces in terms of various ship systems.

h. Defines the ship systems to the level desired for Source Data Automation (SDA), thereby providing a tool that can be used in equipment validation preparatory to installation of SDA, and in aiding shipboard personnel in selecting the proper SDA cards.

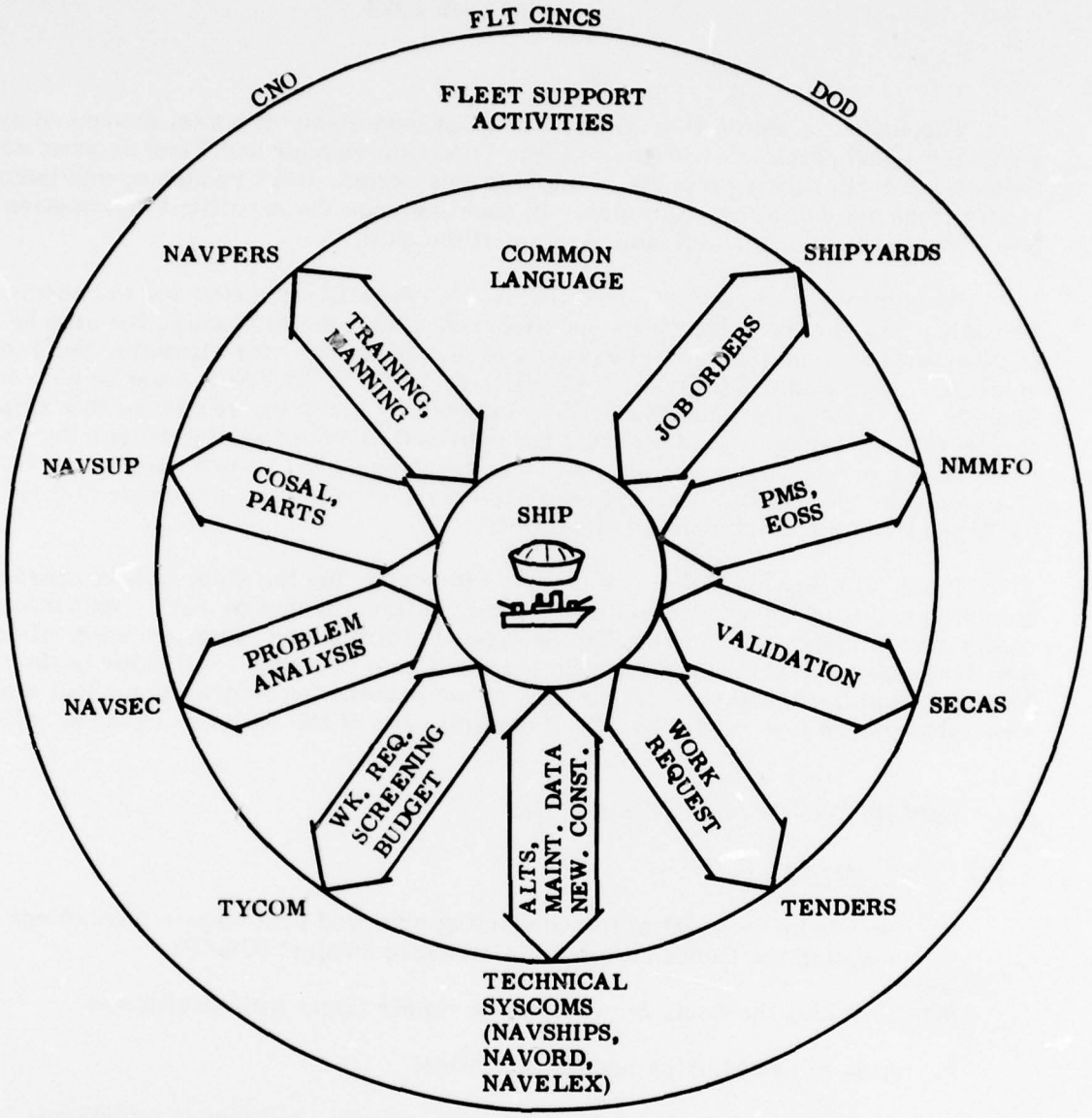


Figure 4. Uses of Ship Systems Definition and Index

i. Aids in standardizing shipboard validation procedures.

j. Provides a means for identifying deficiencies in shipboard documentation such as the Coordinated Shipboard Allowance List (COSAL), Planned Maintenance System (PMS), etc.

k. Provides a capability for reducing duplication in validation programs.

l. Provides a checklist for planning inspections (POTS, INSURV, POST-ROH, etc.).

m. Provides a checklist for determining completeness in PMS coverage.

n. Identifies the level necessary for CSMP and Maintenance Data Collection System (MDCS) inputs.

o. Provides a standard language for maintenance documentation.

p. Provides a common set of system descriptions for the development of maintenance instructions (PMS) and operating instructions (Equipment Operational Sequencing System, EOSS).

3.1.2 Operation

a. Serves as a checklist for determining the completeness of EOSS coverage.

b. Provides a means of identifying the interrelationship between operating systems.

c. Identifies the boundaries and checkpoints for system testing.

d. Provides a means of determining test equipment and support requirements.

3.1.3 Training

a. Provides a disciplined method for displaying a ship's configuration, thereby identifying training requirements from the equipment through the system level.

b. Provides the primary aid in training shipboard operation/maintenance personnel in ship systems and system interfaces.

3.2 SSDI SUPPORT TO OTHER NAVAL ACTIVITIES

3.2.1 Shipyards/Industrial Activities

a. Defines ship systems for alteration and repair planning.

b. Provides a standard language for depot-level MDCS reporting.

c. Provides a standard language for shipyard interface with 4790/2K and/or SDA.

d. Assists in determining priorities of work by displaying the affected equipment in relation to its system.

3.2.2 Navy Maintenance Management Field Office (NMMFO)

a. Defines ship systems such that PMS/EOSS inventory coverage and deficiency can be verified.

b. Provides a standard language for interfacing PMS/EOSS documentation with other Navy configuration data bases.

3.2.3 Ship Equipment Configuration Accounting System (SECAS)

a. Provides a standard structure for total shipboard validation.

b. Provides information for determining the desired level of validation.

3.2.4 Tenders

a. Provides a standard language for intermediate-level MDCS reporting.

b. Presents information for determining priorities of work by displaying the affected equipment in relation to its system.

3.2.5 Technical Systems Commands (NAVSHIPS, NAVORD, NAVELEX)

a. Aids in determining the EIC identification of alterations for inclusion in ShipAlt records and subsequently in each ship's CSMP and other Navy data bases.

b. Identifies ship systems such that the impact of alterations can be determined and decisions made concerning recommended priorities for inclusion in the Fleet Modernization Program (FMP).

c. Provides a means for ensuring that standard failure-data correlation and analysis is performed to the desired level.

d. Serves as a baseline for the development of a complete ship test program.

3.2.6 Type Commanders (TYCOMS)

a. Aids in determining work priorities by displaying the affected equipment in relation to its system.

b. Identifies the system such that the impact of alterations can be determined and decisions made concerning recommended priorities for inclusion in the FMP.

c. Enables the TYCOM to properly identify and budget the systems for repairs.

3.2.7 Naval Ships Engineering Center (NAVSEC)

a. Provides a vehicle for insuring that standard failure-data correlation and analysis is performed to the desired level.

b. Defines the systems for design consideration and subsequent corrective measures such as the Detection and Reporting Technique (DART) program.

c. Provides detailed information for determining the required level of repair parts support requirements.

3.2.8 Naval Supply (NAVSUP)

a. Standardizes level of failure data required for updating the on-board list of repair parts.

b. Provides guidelines for determining the level of APL generation.

3.2.9 Naval Personnel (NAVPERS)

a. Aids in determining technical-rating requirements (skill and level).

b. Aids in determining training requirements.

3.2.10 Fleet Support Activities (NOSO, NAVSEC FIELD ACT, MOTU, Etc.)

a. Identifies shipboard systems as an aid in determining personnel and material requirements in response to solving specific ship problems.

b. Aids in determining required shipboard capabilities (people and equipment).

4. GENERAL INFORMATION, USS GRAPPLE (ARS-7)

4.1 BASIS OF HULL MEASUREMENTS

The DESIGNER'S WATERLINE (D.W.L.) is the waterline corresponding to normal displacement and draft. This waterline is 13'-0" above and parallel to the molded base line.

The D.W.L. IS THE DRAFT DATUM LINE for showing heights of superstructure, rigging, etc., as authorized by NAVSHIPS. This datum line is measured from the BOTTOM of the keel plate amidships.

The FORWARD PERPENDICULAR (F.P.) is a vertical passing through the point where the designer's waterline and the forward side of the ship stem intersect.

The AFTER PERPENDICULAR (A.P.) is a vertical passing through the point where the designer's waterline and the molded line of the ship's stern intersect.

The MOLDED BASE LINE (M.B.L.) is the top of the flat keel.

THIS SHIP HAS NO PROJECTIONS BELOW THE BOTTOM OF THE KEEL.

4.2 PRINCIPAL DIMENSIONS OF HULL

Length, overall	213'-6"
Length between perpendiculars	207'-0"
Breadth, extreme, to outside of fenders	40'-8"
Breadth, molded	39'-0"
Draft above bottom of keel amidships designation	13'-0"

4.3 FRAME SPACING

Frames are numbered from 0, which is at the forward perpendicular, to 111, which is 16" forward of the after perpendicular.

Frame 1 to Frame 27	18"
Frame 27 to Frame 94	24"
Frame 94 to Frame 111	22"

4.4 BERTHING ACCOMMODATIONS

4.4.1 Officers

Captain	(Built-in Berth)	Forecastle Deck	1
Exec. Officer	(Built-in Berth)	Forecastle Deck	1
Officer	(Built-in Berth)	Forecastle Deck	4
Engineer Officer	(Built-in Berth)	Main Deck	1
First Lieutenant	(Built-in Berth)	Main Deck	1
		TOTAL OFFICER	8

4.4.2 Crew (All Enlisted Personnel)

C.P.O. Berthing (A-104-2L)	(C.P.O. Berth)	Main Deck	6
Crew's Quarters (A-103-L)	(Crew Berth)	Main Deck	27
Crew's Quarters (A-203-EL)	(Crew Berth)	First Platform	45
		TOTAL CREW	78

5. GENERAL INFORMATION, USS BOLSTER (ARS-38)

5.1 BASIS OF HULL MEASUREMENTS

The DESIGNER'S WATERLINE (D.W.L.) is the waterline corresponding to normal displacement and draft. This waterline is 13'-0" above and parallel to the molded base line.

The D.W.L. IS THE DRAFT DATUM LINE for showing heights of superstructure, rigging, etc., as authorized by NAVSHIPS. This datum line is measured from the BOTTOM of the keel plate amidships.

The FORWARD PERPENDICULAR (F.P.) is a vertical passing through the point where the designer's waterline and the forward side of the ship stem intersect.

The AFTER PERPENDICULAR (A.P.) is a vertical passing through the point where the designer's waterline and the molded line of the ship's stern intersect.

The MOLDED BASE LINE (M.B.L.) is the top of the flat keel.

THIS SHIP HAS NO PROJECTIONS BELOW THE BOTTOM OF THE KEEL.

5.2 PRINCIPAL DIMENSIONS OF HULL

Length, overall	213'-6"
Length between perpendiculars	207'-0"
Breadth, extreme, to outside of fenders	43'-11"
Breadth, molded	43'-0"
Draft above bottom of keel amidships designation	13'-0"

5.3 FRAME SPACING

Frames are numbered from 0, which is at the forward perpendicular, to 111, which is 16" forward of the after perpendicular.

Frame 1 to Frame 27	18"
Frame 27 to Frame 94	24"
Frame 94 to Frame 111	22"

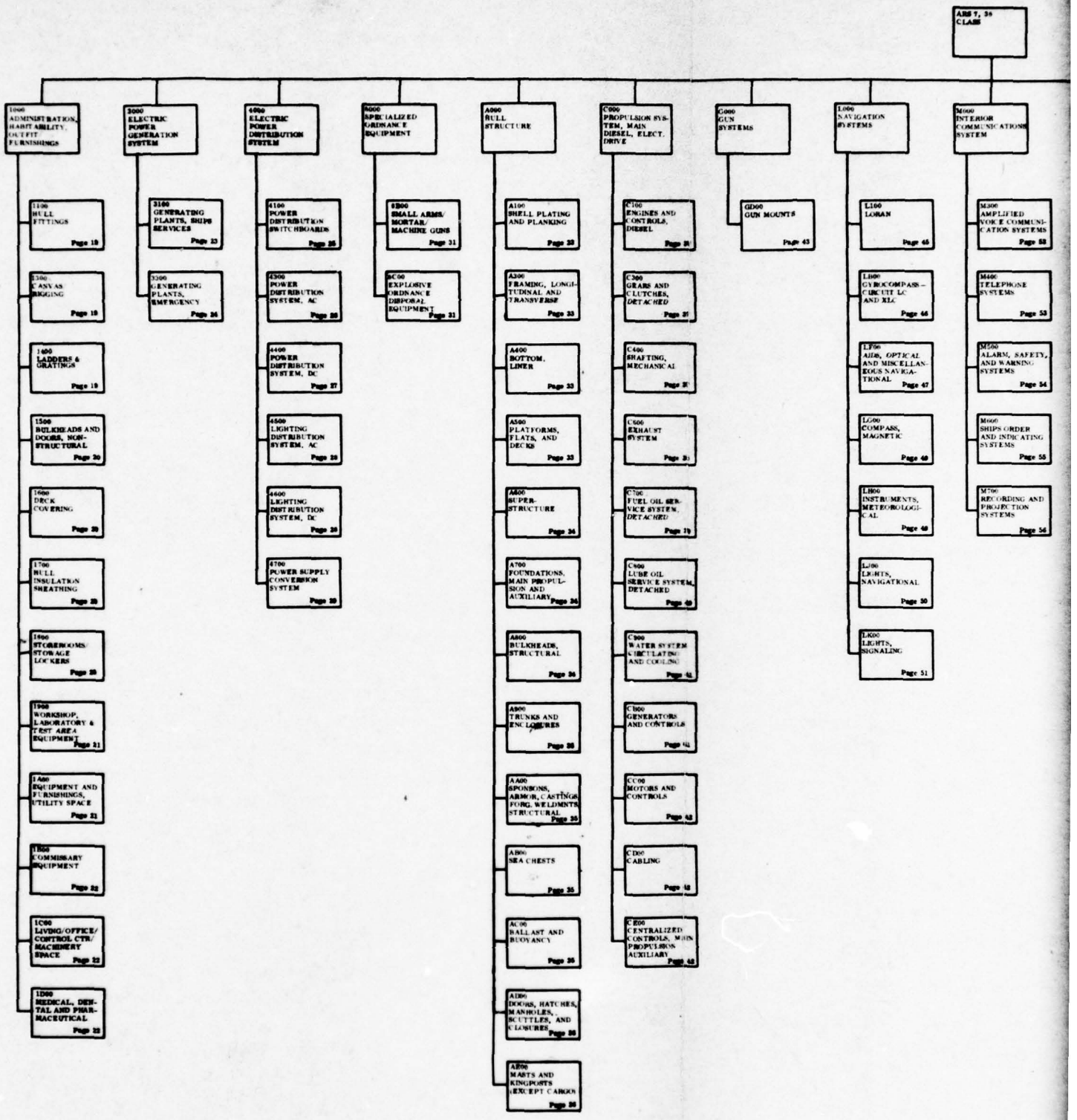
5.4 BERTHING ACCOMMODATIONS

5.4.1 Officers

Captain	(Built-in Berth)	Forecastle Deck	1
Exec. Officer	(Built-in Berth)	Forecastle Deck	1
Officer	(Built-in Berth)	Forecastle Deck	4
Engineer Officer	(Built-in Berth)	Main Deck	1
Officer	(Built-in Berth)		1
	(C.P.O. Berth)		1
		TOTAL OFFICER	9

5.4.2 Crew (All Enlisted Personnel)

C.P.O. Berthing (A-203-L)(A-104-1L)	(C.P.O. Berth)	Main Deck	4
Crew's Quarters (A-103-ACL)	(Crew Berth)	Main Deck	30
1st Class (A-102-AEL)	(Crew Berth)	Main Deck	9
Crew's Quarters (A-203-EL)	(Crew Berth)	First Platform	48
		TOTAL CREW	91


ARS 7, 36 CLASS
1000 ADMINISTRATION, HABITABILITY, OUTFIT FURNISHINGS
1100 HULL FITTINGS
Page 19
1300 CANVAS RIGGING
Page 19
1400 LADDERS & GRATINGS
Page 19
1500 BULKHEADS AND DOORS, NON-STRUCTURAL
Page 20
1600 DECK COVERING
Page 20
1700 HULL INSULATION SHEATHING
Page 20
1800 STOREROOMS/ STOWAGE LOCKERS
Page 20
1900 WORKSHOP, LABORATORY & TEST AREA EQUIPMENT
Page 21
1A00 EQUIPMENT AND FURNISHINGS, UTILITY SPACE
Page 21
1B00 COMMISSARY EQUIPMENT
Page 22
1C00 LIVING/OFFICE/ CONTROL CTR/ MACHINERY SPACE
Page 22
1D00 MEDICAL, DENTAL AND PHARMACEUTICAL
Page 22
2000 ELECTRIC POWER GENERATION SYSTEM
3100 GENERATING PLANTS, SHIPS SERVICES
Page 23
3300 GENERATING PLANTS, EMERGENCY
Page 24
4000 ELECTRIC POWER DISTRIBUTION SYSTEM
4100 POWER DISTRIBUTION SWITCHBOARDS
Page 25
4300 POWER DISTRIBUTION SYSTEM, AC
Page 26
4400 POWER DISTRIBUTION SYSTEM, DC
Page 27
4500 LIGHTING DISTRIBUTION SYSTEM, AC
Page 28
4600 LIGHTING DISTRIBUTION SYSTEM, DC
Page 28
4700 POWER SUPPLY CONVERSION SYSTEM
Page 29
6000 SPECIALIZED ORDNANCE EQUIPMENT
6B00 SMALL ARMS/ MORTAR/ MACHINE GUNS
Page 31
6C00 EXPLOSIVE ORDNANCE DISPOSAL EQUIPMENT
Page 31
A000 HULL STRUCTURE
A100 SHELL PLATING AND PLANKING
Page 32
A300 FRAMING, LONGITUDINAL AND TRANSVERSE
Page 33
A400 BOTTOM, LINER
Page 33
A500 PLATFORMS, FLATS, AND DECKS
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A600 SUPERSTRUCTURE
Page 34
A700 FOUNDATIONS, MAIN PROPULSION AND AUXILIARY
Page 34
A800 BULKHEADS, STRUCTURAL
Page 34
A900 TRUNKS AND ENCLOSURES
Page 35
AA00 SPONSONS, ARMOR, CASTINGS, FORG, WELDMNTS, STRUCTURAL
Page 35
AB00 SEA CHESTS
Page 35
AC00 BALLAST AND BUOYANCY
Page 36
AD00 DOORS, HATCHES, MANHOLES, SCUTTLES, AND CLOSURES
Page 36
AE00 MASTS AND KINGPOSTS (EXCEPT CARGO)
Page 36
C000 PROPULSION SYSTEM, MAIN DIESEL, ELECT. DRIVE
C100 ENGINES AND CONTROLS, DIESEL
Page 37
C300 GEARS AND CLUTCHES, DETACHED
Page 37
C400 SHAFTING, MECHANICAL
Page 37
C500 EXHAUST SYSTEM
Page 38
C700 FUEL OIL SERVICE SYSTEM, DETACHED
Page 39
C900 LUBE OIL SERVICE SYSTEM, DETACHED
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CB00 WATER SYSTEM CIRCULATING AND COOLING
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CH00 GENERATORS AND CONTROLS
Page 42
CC00 MOTORS AND CONTROLS
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CD00 CABLING
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CE00 CENTRALIZED CONTROLS, MAIN PROPULSION AUXILIARY
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G000 GUN SYSTEMS
GD00 GUN MOUNTS
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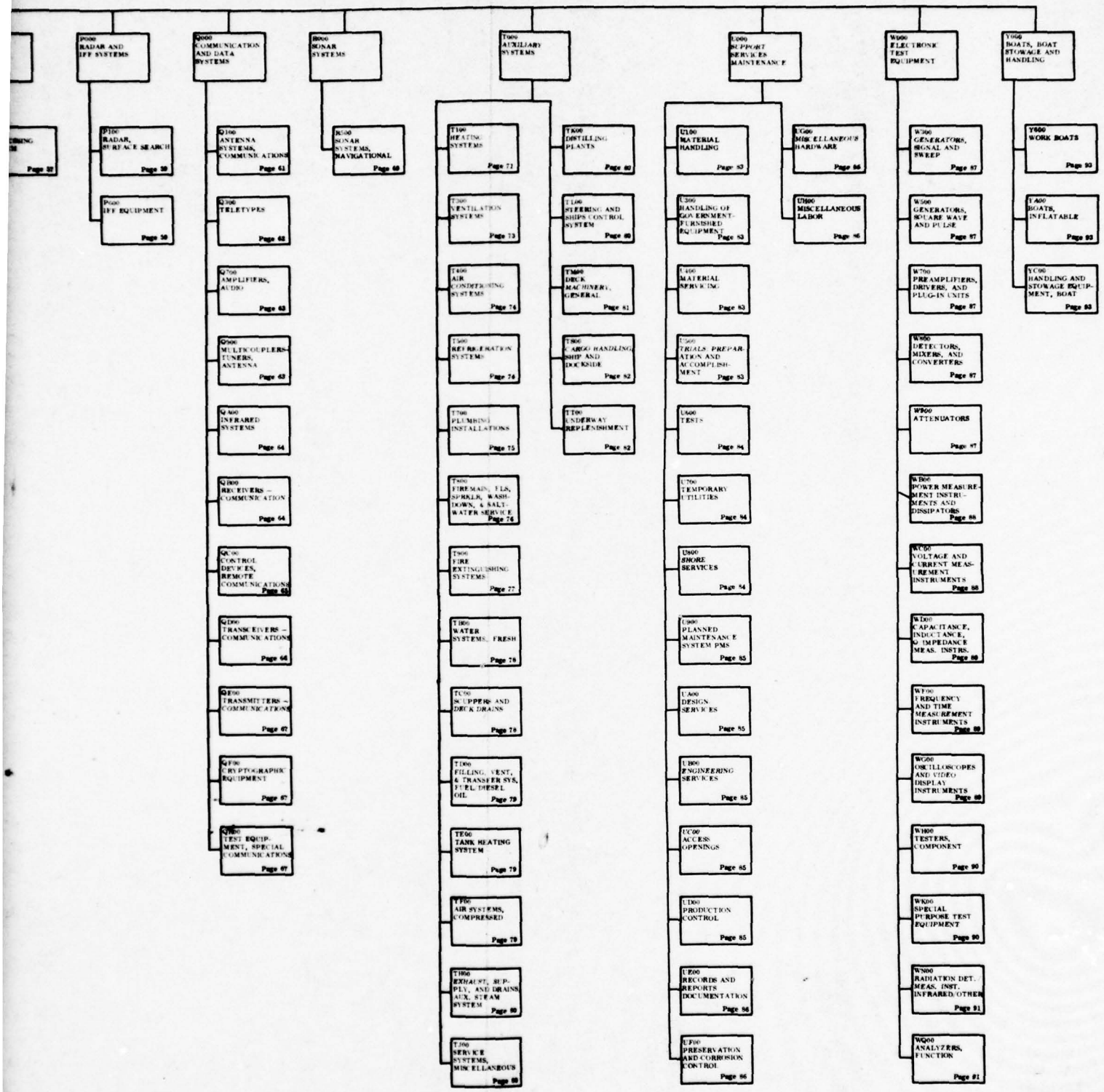
L000 NAVIGATION SYSTEMS
L160 LORAN
Page 46
L300 GYRO/COMPASS – CIRCUIT LC AND XLC
Page 46
LF00 AIDS, OPTICAL AND MISCELLANEOUS NAVIGATIONAL
Page 47
LG00 COMPASS, MAGNETIC
Page 48
LH00 INSTRUMENTS, METEOROLOGICAL
Page 48
LJ00 LIGHTS, NAVIGATIONAL
Page 50
LK00 LIGHTS, SIGNALING
Page 51
M000 INTERIOR COMMUNICATIONS SYSTEM
M300 AMPLIFIED VOICE COMMUNICATION SYSTEMS
Page 52
M400 TELEPHONE SYSTEMS
Page 53
M500 ALARM, SAFETY, AND WARNING SYSTEMS
Page 54
M600 SHIPS ORDER AND INDICATING SYSTEMS
Page 55
M700 RECORDING AND PROJECTION SYSTEMS
Page 56



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SUMMARY DIAGRAM

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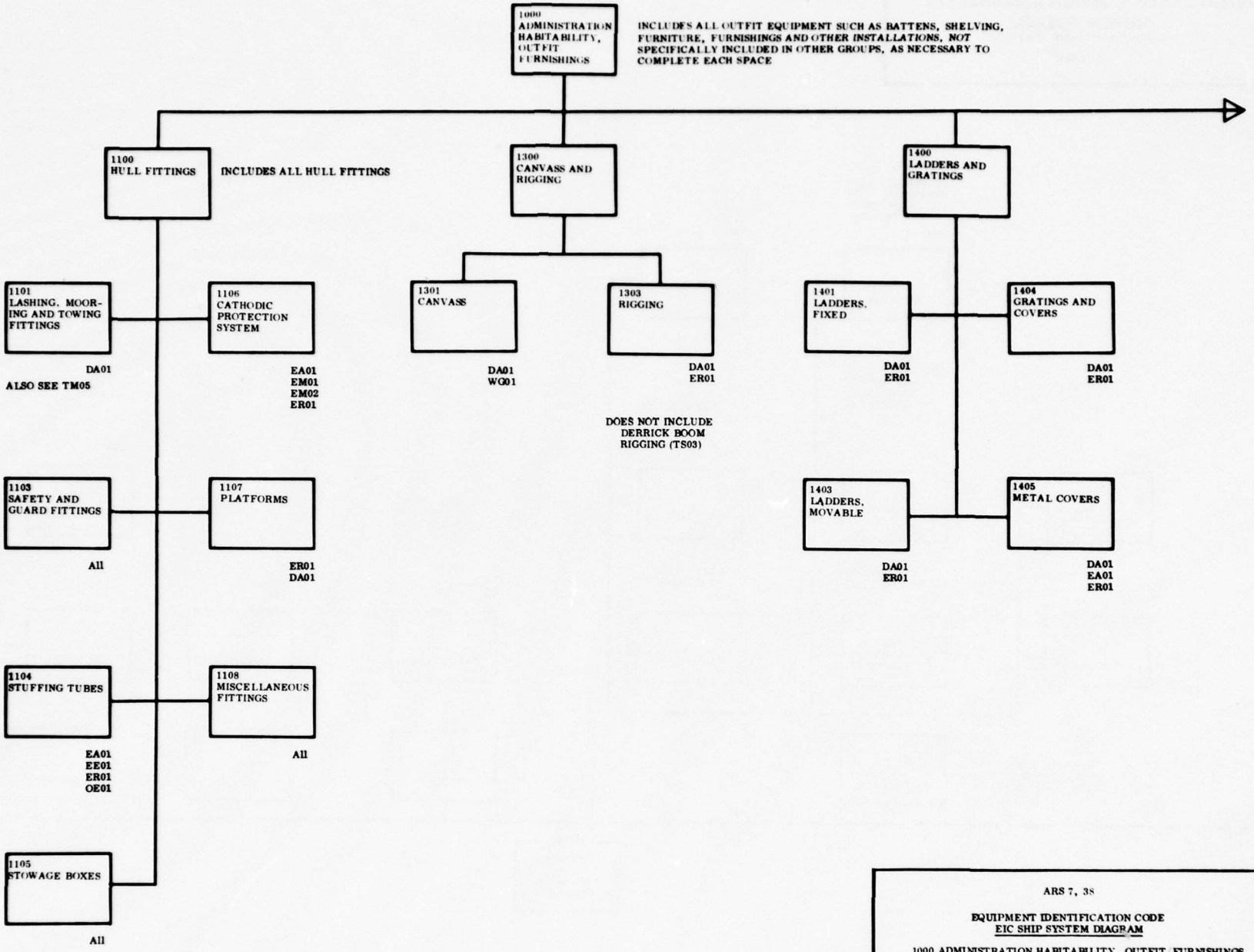

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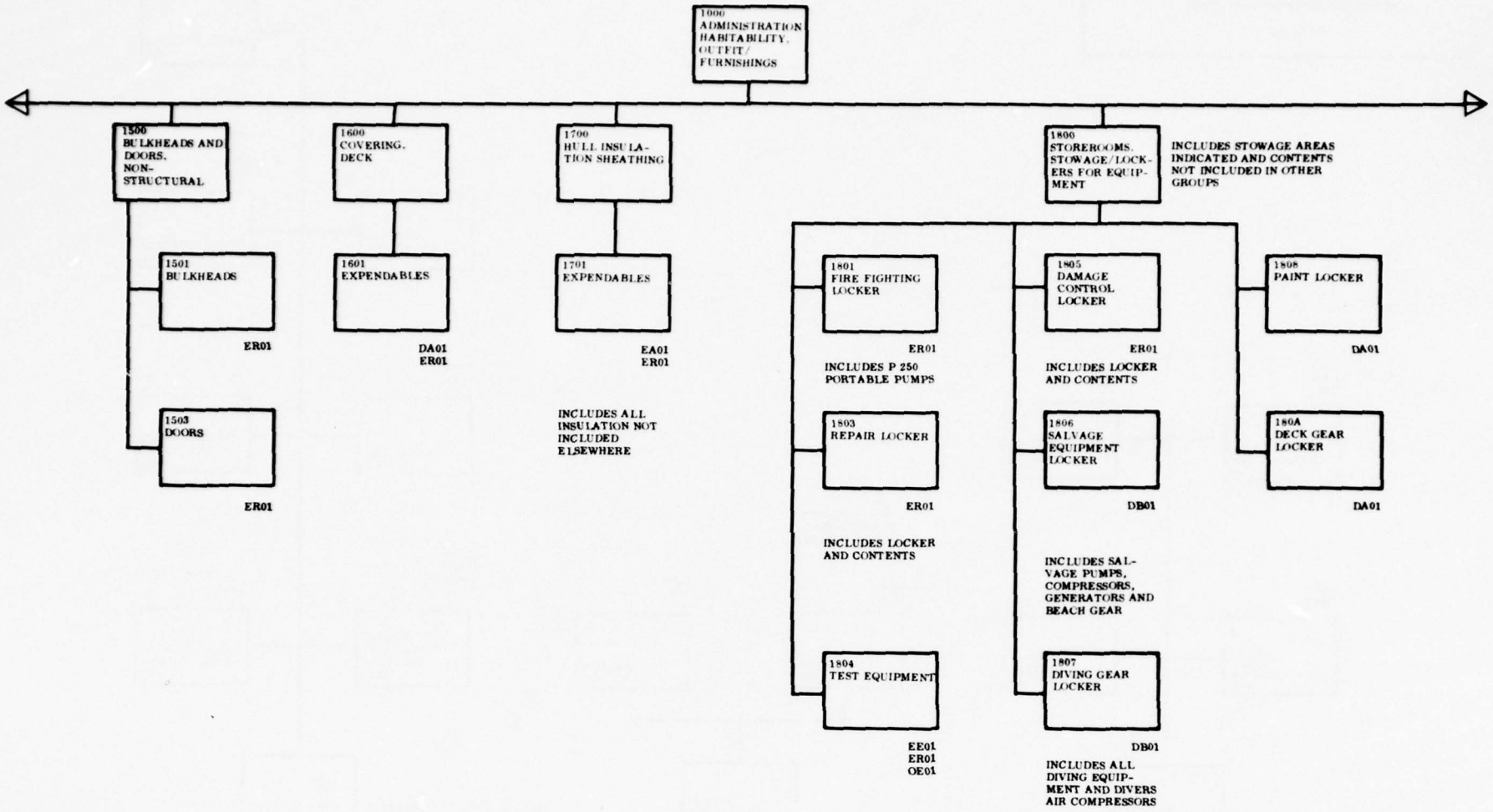

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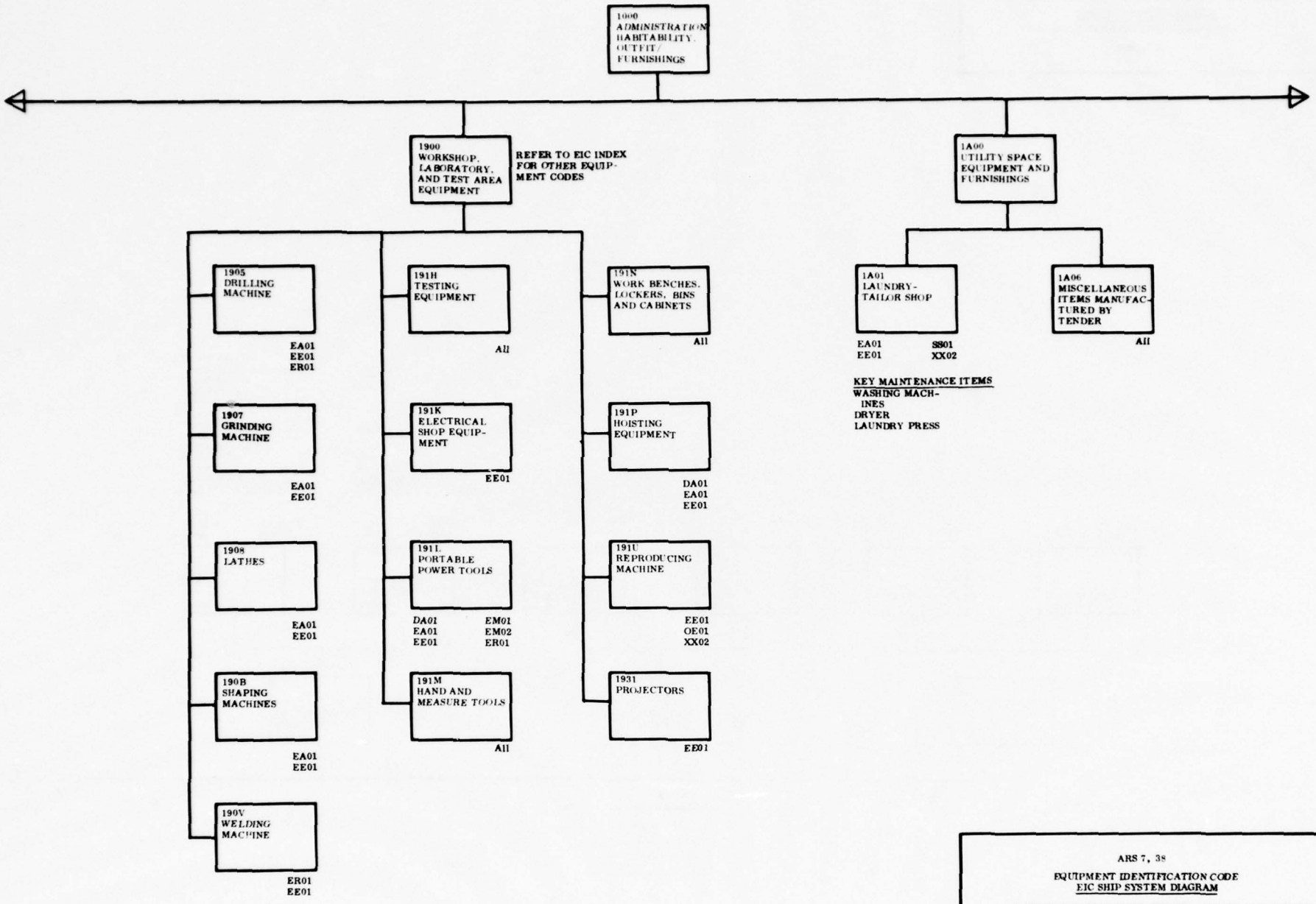

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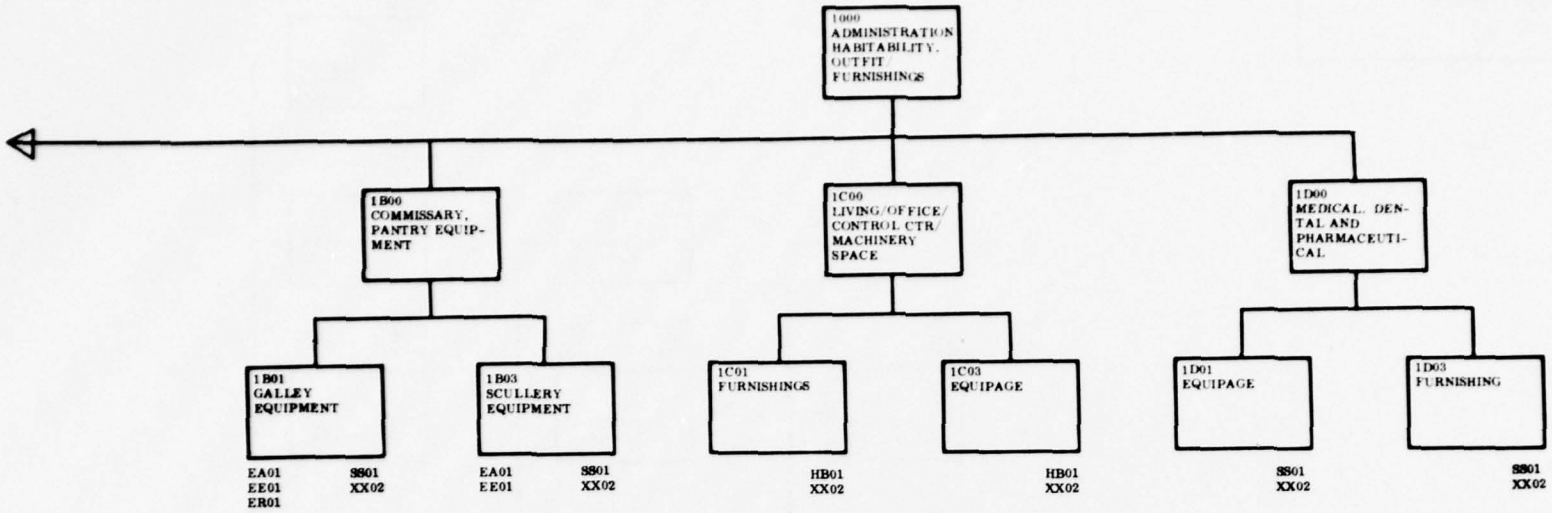

KEY MAINTENANCE ITEMS
STEAM KETTLES
OVENS
GRIDDLES
DEEP FAT FRYERS
REFRIGERATORS, REACH-IN
COFFEE URN
FOOD MIXER
FOOD SLICER
VEGETABLE PEELER
TOASTER

KEY MAINTENANCE ITEMS
DISHWASHING MACHINE
SINK

ARS 7, 38

EQUIPMENT IDENTIFICATION CODE
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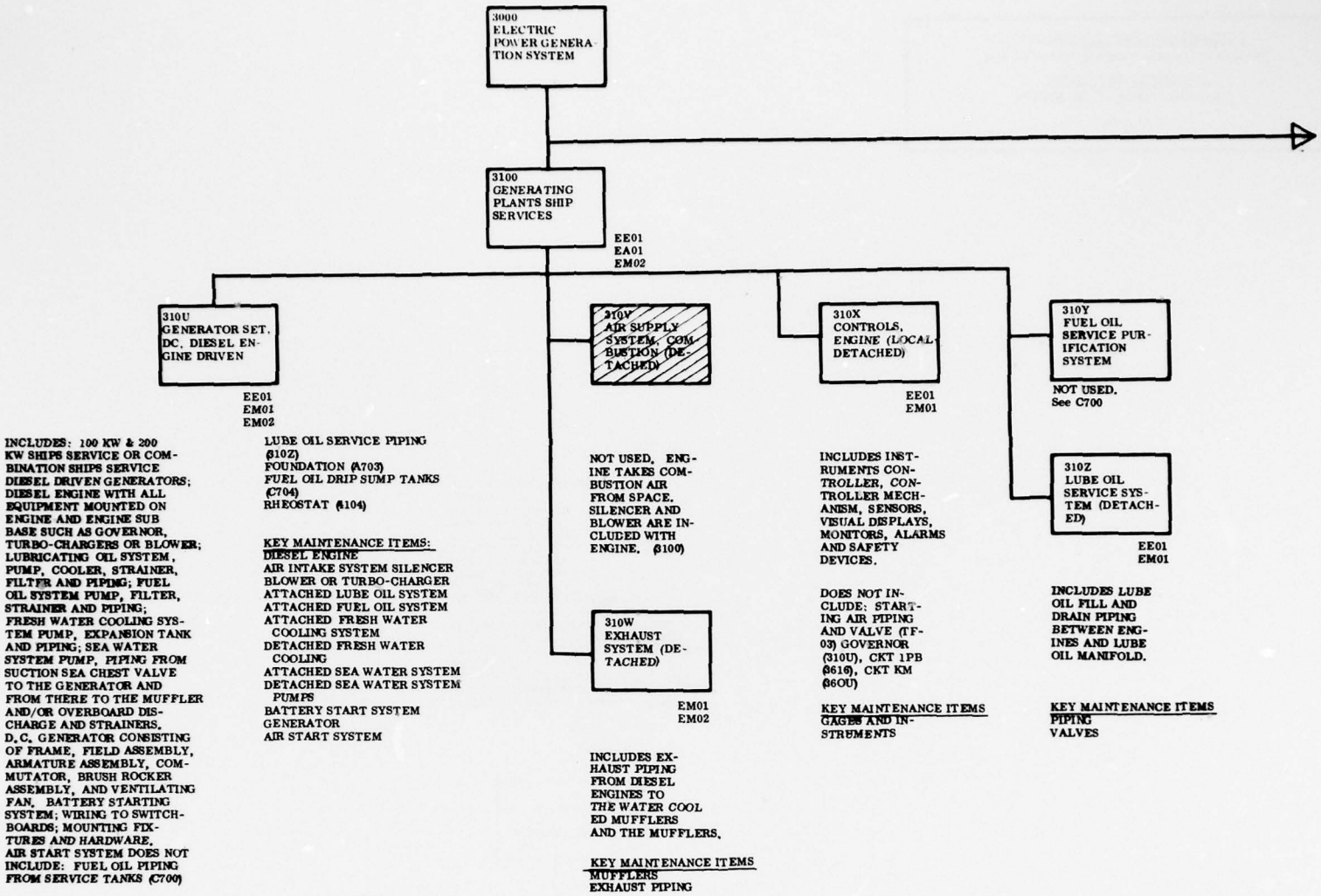
1B00 - 1D00



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EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

3000 ELECTRIC POWER GENERATION SYSTEM
3100 GENERATING PLANTS SHIP SERVICE

EA01
EE01
EM01

INCLUDES EMERGENCY ELECTRONIC POWER AC GENERATOR; DIESEL ENGINE, FILTER, FUEL INJECTOR, MUFFLER, FUEL PUMP, GENERATOR, STARTER MOTOR, BATTERIES, VOLTAGE REGULATOR, WIRING TO ELECTRONICS PANEL, MOUNTING FIXTURES AND HARDWARE.

KEY MAINTENANCE ITEMS:
DIESEL ENGINE
LUBE OIL SYSTEM
FUEL OIL SYSTEM
COOLING SYSTEM
AIR INTAKE SYSTEM
EXHAUST SYSTEM
STARTER SYSTEMS
GENERATOR
VOLTAGE REGULATORS

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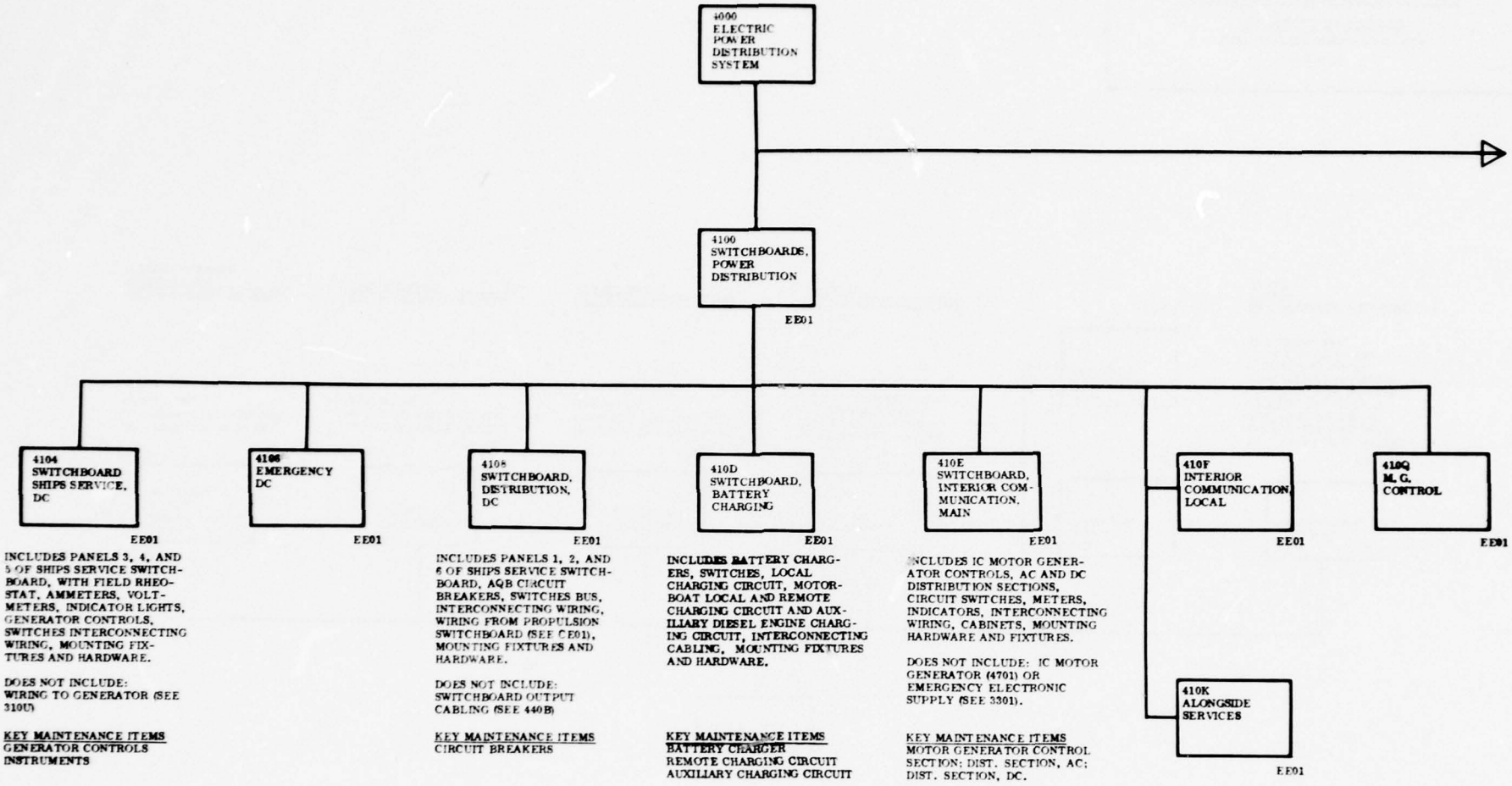
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

3000 ELECTRIC POWER GENERATION SYSTEM
3300 GENERATING PLANTS EMERGENCY



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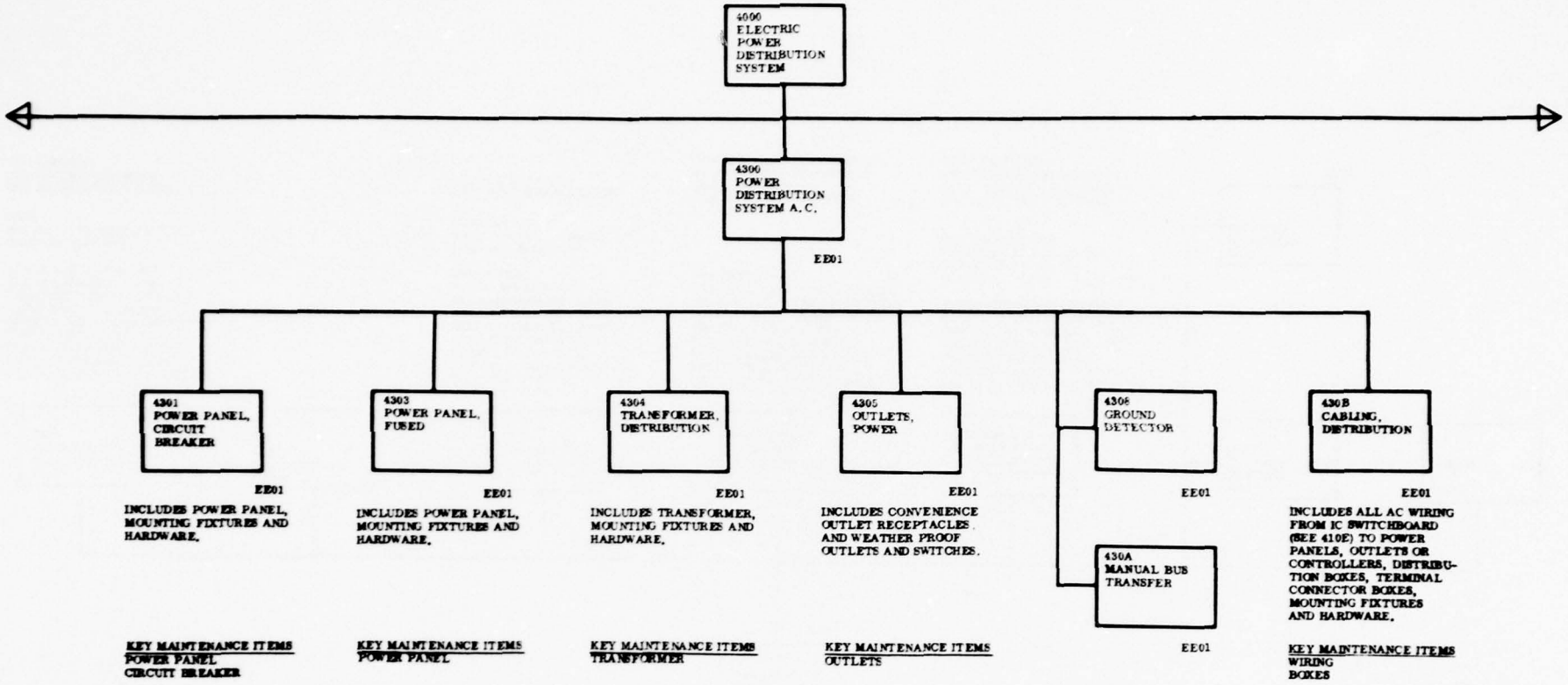
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

4000 ELECTRIC POWER DISTRIBUTION SYSTEM
4100 SWITCHBOARDS, POWER DISTRIBUTION



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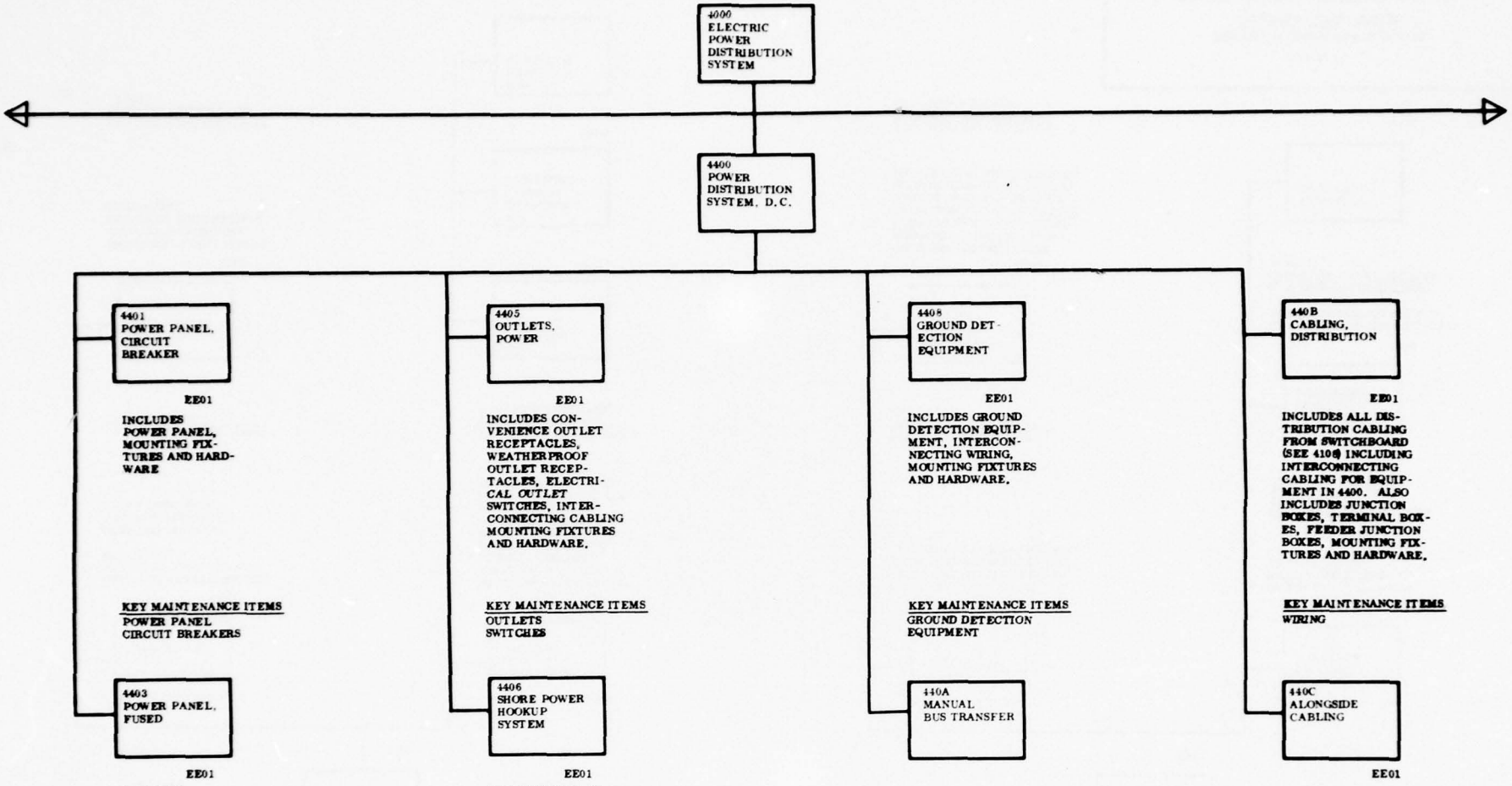
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

4000 ELECTRIC POWER DISTRIBUTION SYSTEM
4300 POWER DISTRIBUTION SYSTEM A.C.



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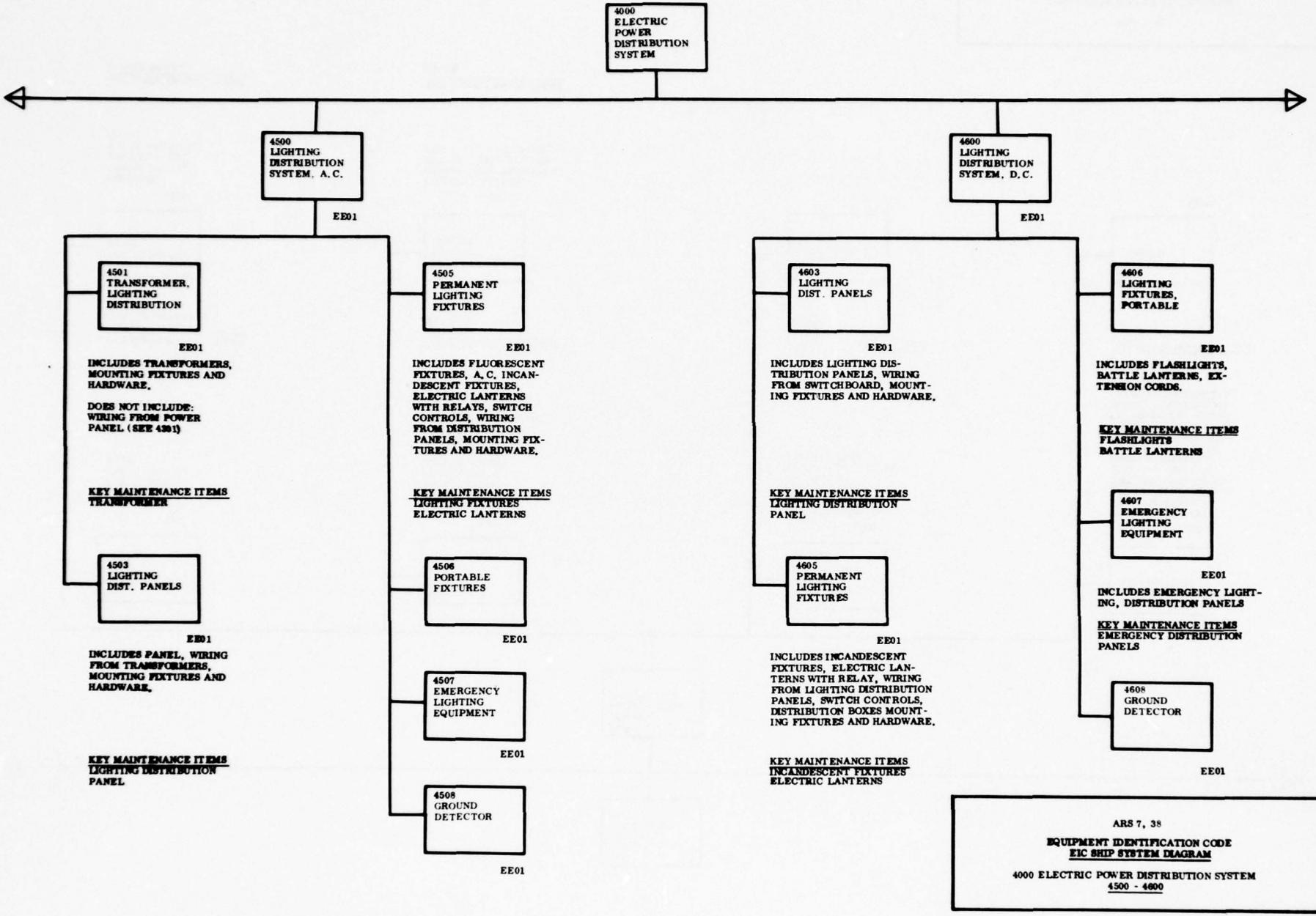
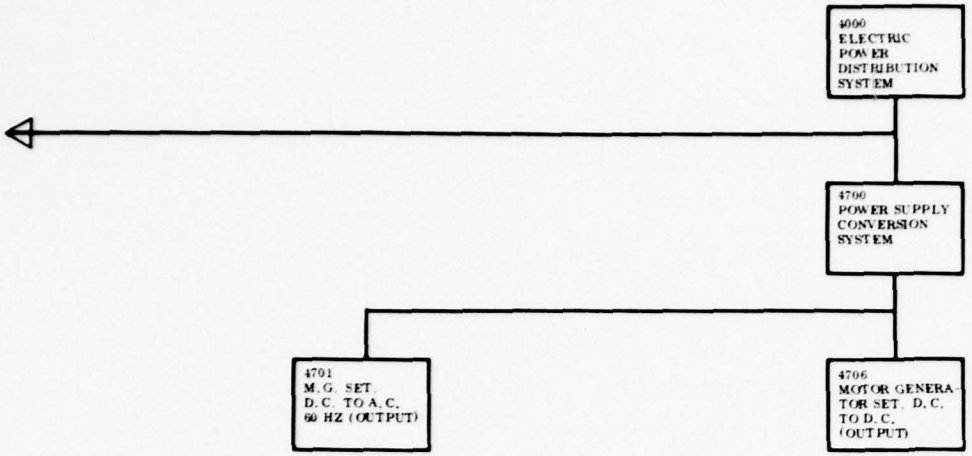
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

4000 ELECTRIC POWER DISTRIBUTION SYSTEM
4400 POWER DISTRIBUTION SYSTEM D.C.


4000
ELECTRIC
POWER
DISTRIBUTION
SYSTEM
4500
LIGHTING
DISTRIBUTION
SYSTEM, A.C.
EE01
4501
TRANSFORMER,
LIGHTING
DISTRIBUTION
EE01
INCLUDES TRANSFORMERS, MOUNTING FIXTURES AND HARDWARE.
DOES NOT INCLUDE: WIRING FROM POWER PANEL (SEE 4301)
KEY MAINTENANCE ITEMS
TRANSFORMER
4503
LIGHTING
DIST. PANELS
EE01
INCLUDES PANEL, WIRING FROM TRANSFORMERS, MOUNTING FIXTURES AND HARDWARE.
KEY MAINTENANCE ITEMS
LIGHTING DISTRIBUTION
PANEL
4505
PERMANENT
LIGHTING
FIXTURES
EE01
INCLUDES FLUORESCENT FIXTURES, A.C. INCANDESCENT FIXTURES, ELECTRIC LANTERNS WITH RELAYS, SWITCH CONTROLS, WIRING FROM DISTRIBUTION PANELS, MOUNTING FIXTURES AND HARDWARE.
KEY MAINTENANCE ITEMS
LIGHTING FIXTURES
ELECTRIC LANTERNS
4506
PORTABLE
FIXTURES
EE01
4507
EMERGENCY
LIGHTING
EQUIPMENT
EE01
4508
GROUND
DETECTOR
EE01
4600
LIGHTING
DISTRIBUTION
SYSTEM, D.C.
EE01
4603
LIGHTING
DIST. PANELS
EE01
INCLUDES LIGHTING DISTRIBUTION PANELS, WIRING FROM SWITCHBOARD, MOUNTING FIXTURES AND HARDWARE.
KEY MAINTENANCE ITEMS
LIGHTING DISTRIBUTION
PANEL
4605
PERMANENT
LIGHTING
FIXTURES
EE01
INCLUDES INCANDESCENT FIXTURES, ELECTRIC LANTERNS WITH RELAY, WIRING FROM LIGHTING DISTRIBUTION PANELS, SWITCH CONTROLS, DISTRIBUTION BOXES MOUNTING FIXTURES AND HARDWARE.
KEY MAINTENANCE ITEMS
INCANDESCENT FIXTURES
ELECTRIC LANTERNS
4606
LIGHTING
FIXTURES,
PORTABLE
EE01
INCLUDES FLASHLIGHTS, BATTLE LANTERNS, EXTENSION CORDS.
KEY MAINTENANCE ITEMS
FLASHLIGHTS
BATTLE LANTERNS
4607
EMERGENCY
LIGHTING
EQUIPMENT
EE01
INCLUDES EMERGENCY LIGHTING, DISTRIBUTION PANELS
KEY MAINTENANCE ITEMS
EMERGENCY DISTRIBUTION
PANELS
4608
GROUND
DETECTOR
EE01
ARS 7, 38
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM
4000 ELECTRIC POWER DISTRIBUTION SYSTEM
4500 - 4600



OE01
EE01

INCLUDES ELECTRONIC EQUIPMENT MOTOR GENERATORS, I.C. MOTOR GENERATOR, AIR CONDITIONING MOTOR GENERATOR; MOTOR, GENERATOR, CONTROLLER, REMOTE CONTROL POWER PANEL, EXCITER, FREQUENCY AND VOLTAGE REGULATORS, RHEOSTAT, OUTPUT WIRING TO POWER. PANEL (SEE 4301), INPUT WIRING FROM SHIP SERVICE SWITCHBOARD (SEE 4104) INTERCONNECTING WIRING, MOUNTING FIXTURES AND HARDWARE.

DOES NOT INCLUDE GYROCOMPASS MOTOR GENERATOR (SEE LB00)

KEY MAINTENANCE ITEMS
MOTOR
GENERATOR
CONTROLLER
EXCITER
VOLTAGE REGULATOR

EE01

INCLUDES TOWING WINCH MOTOR GENERATOR; MOTOR, GENERATOR, M-G SET CONTROLLER, GENERATOR OUTPUT WIRING TO VARIABLE VOLTAGE GENERATOR CONTROLLER (SEE TM05), WIRING FROM TOWING WINCH TO M-G SET WIRING FROM SHIPS SERVICE SWITCHBOARD (SEE 4104), INTERCONNECTING WIRING, MOUNTING FIXTURES AND HARDWARE.

DOES NOT INCLUDE TOWING WINCH (SEE TM05), REMOTE CONTROLS (SEE TM04)

KEY MAINTENANCE ITEMS
MOTOR
GENERATOR
CONTROLLER

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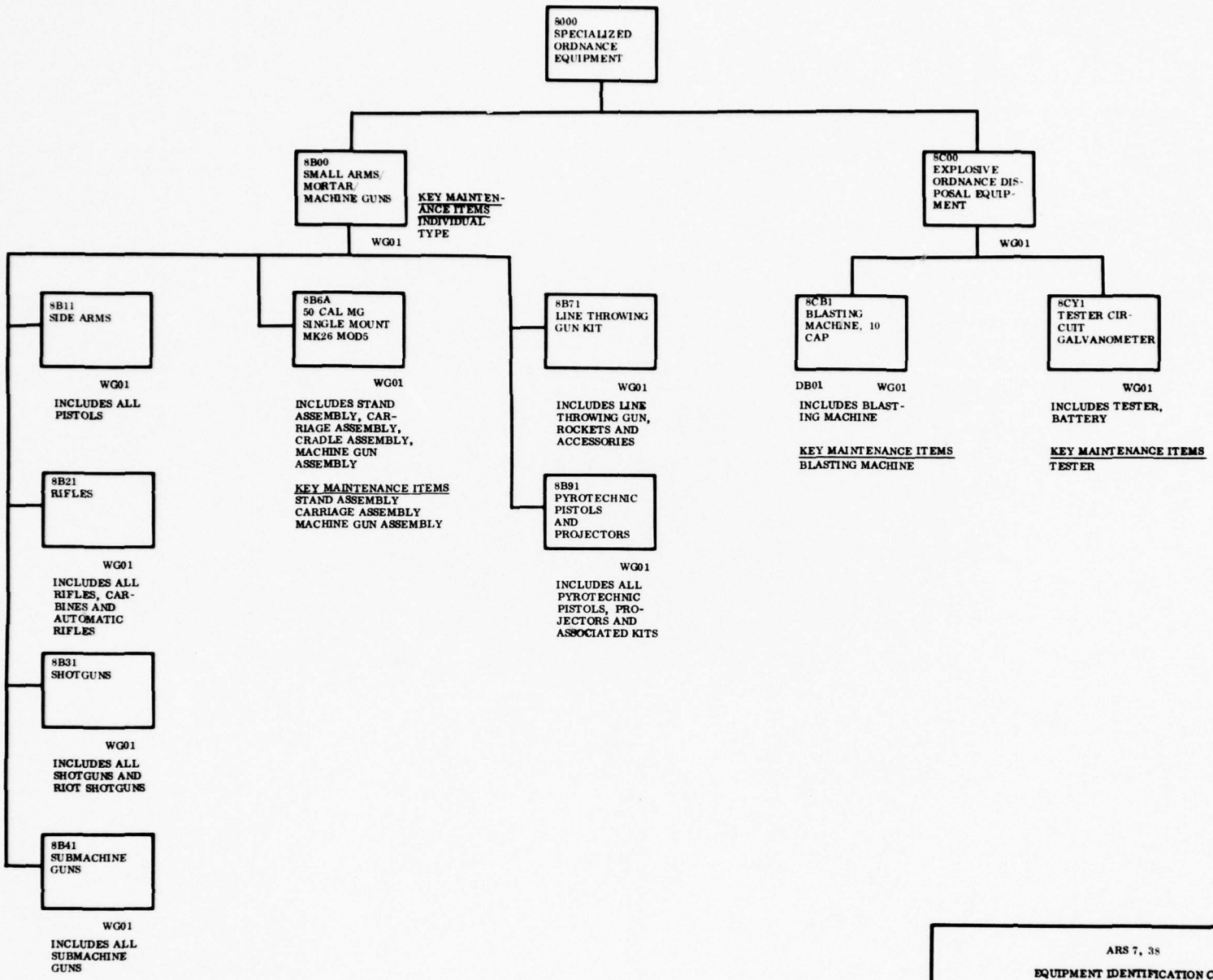
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

4000 ELECTRIC POWER DISTRIBUTION SYSTEM
4700 POWER SUPPLY CONVERSION SYSTEM



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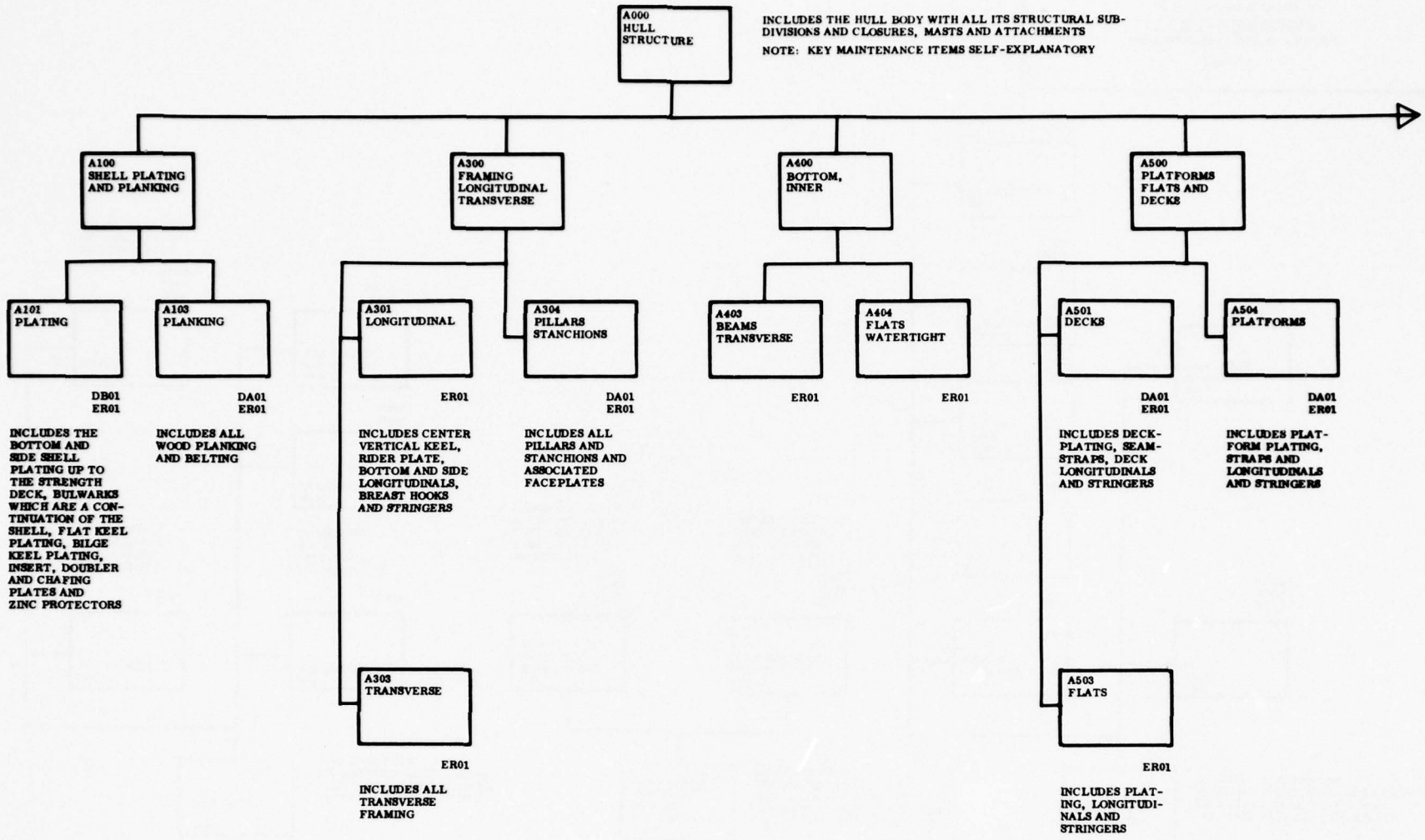
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

8000 SPECIALIZED ORDNANCE EQUIPMENT
8B00 - 8C00



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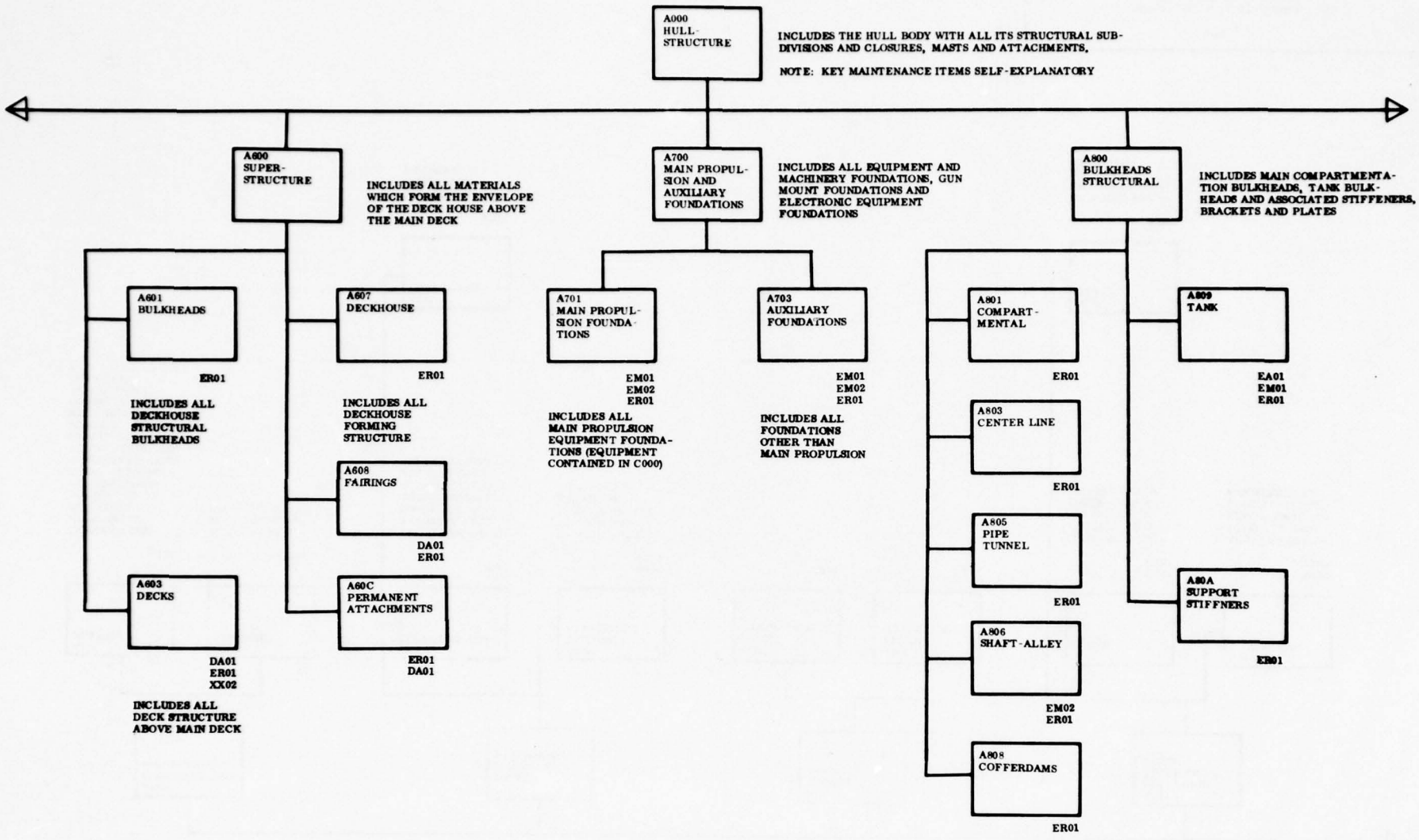
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

A000 HULL-STRUCTURE
A100 - A500



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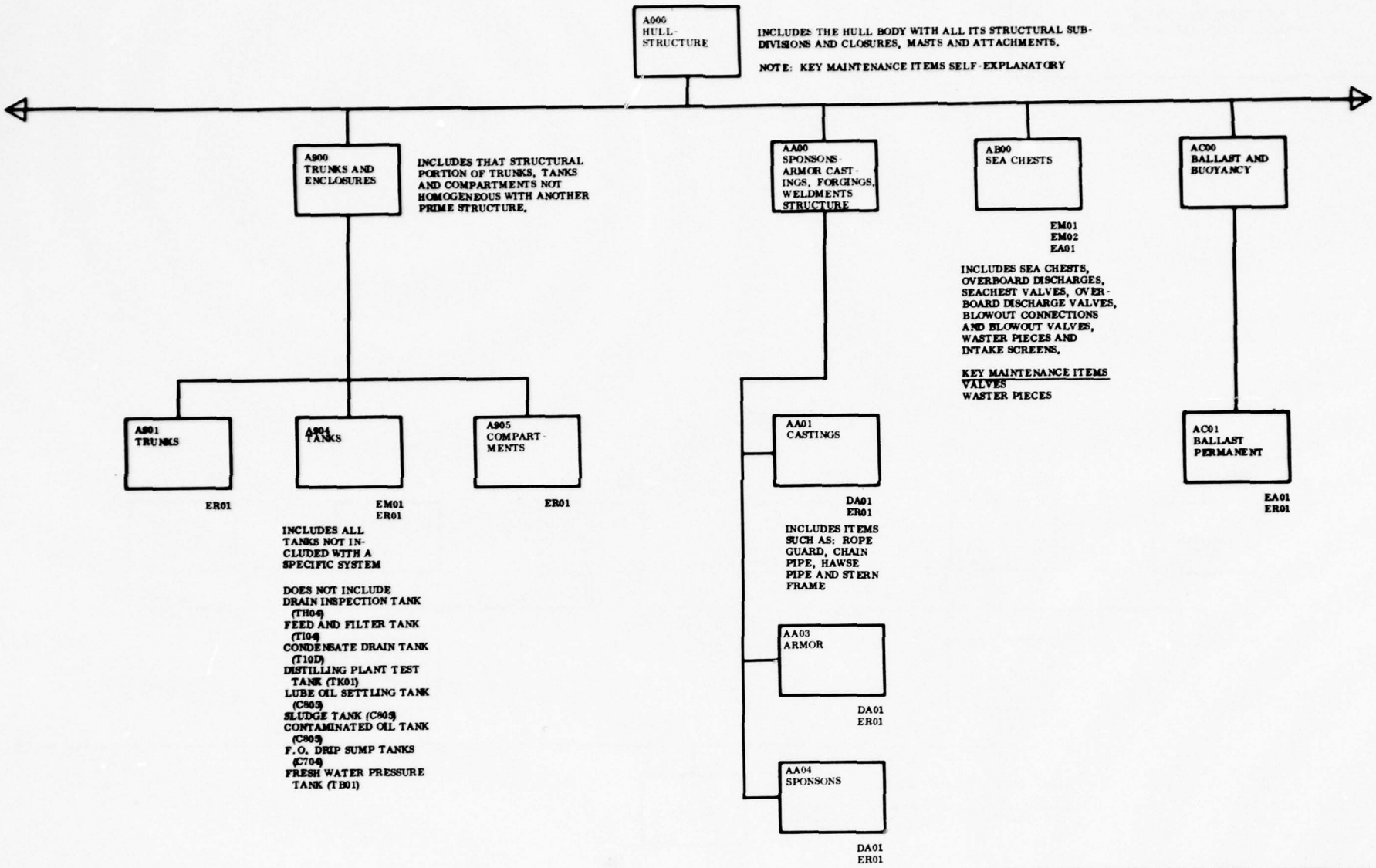
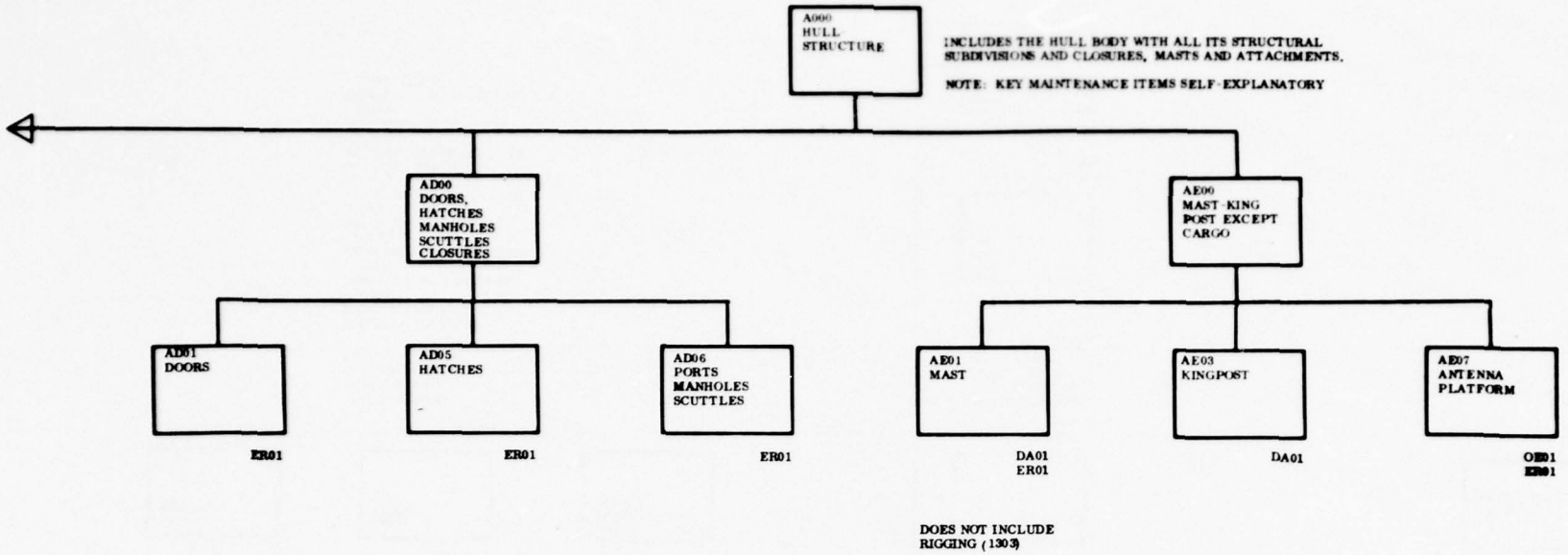
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

A000 HULL-STRUCTURE
A600 - A800


A000
HULL-STRUCTURE
INCLUDES THE HULL BODY WITH ALL ITS STRUCTURAL SUB-DIVISIONS AND CLOSURES, MASTS AND ATTACHMENTS.
NOTE: KEY MAINTENANCE ITEMS SELF-EXPLANATORY
A900
TRUNKS AND ENCLOSURES
INCLUDES THAT STRUCTURAL PORTION OF TRUNKS, TANKS AND COMPARTMENTS NOT HOMOGENEOUS WITH ANOTHER PRIME STRUCTURE.
AA00
SPONSONS-ARMOR CASTINGS, FORGINGS, WELDMENTS STRUCTURE
AB00
SEA CHESTS
EM01
EM02
EA01
INCLUDES SEA CHESTS, OVERBOARD DISCHARGES, SEACHEST VALVES, OVERBOARD DISCHARGE VALVES, BLOWOUT CONNECTIONS AND BLOWOUT VALVES, WASTER PIECES AND INTAKE SCREENS.
KEY MAINTENANCE ITEMS
VALVES
WASTER PIECES
AC00
BALLAST AND BUOYANCY
A901
TRUNKS
ER01
A904
TANKS
EM01
ER01
INCLUDES ALL TANKS NOT INCLUDED WITH A SPECIFIC SYSTEM
DOES NOT INCLUDE
DRAIN INSPECTION TANK (TH04)
FEED AND FILTER TANK (T104)
CONDENSATE DRAIN TANK (T10D)
DISTILLING PLANT TEST TANK (TK01)
LUBE OIL SETTLING TANK (C805)
SLUDGE TANK (C805)
CONTAMINATED OIL TANK (C805)
F.O. DRIP SUMP TANKS (C704)
FRESH WATER PRESSURE TANK (TB01)
A905
COMPARTMENTS
ER01
AA01
CASTINGS
DA01
ER01
INCLUDES ITEMS SUCH AS: ROPE GUARD, CHAIN PIPE, HAWSE PIPE AND STERN FRAME
AA03
ARMOR
DA01
ER01
AA04
SPONSONS
DA01
ER01
AC01
BALLAST PERMANENT
EA01
ER01
ARS 7, 38
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM
A000 HULL-STRUCTURE
A900 - AC00



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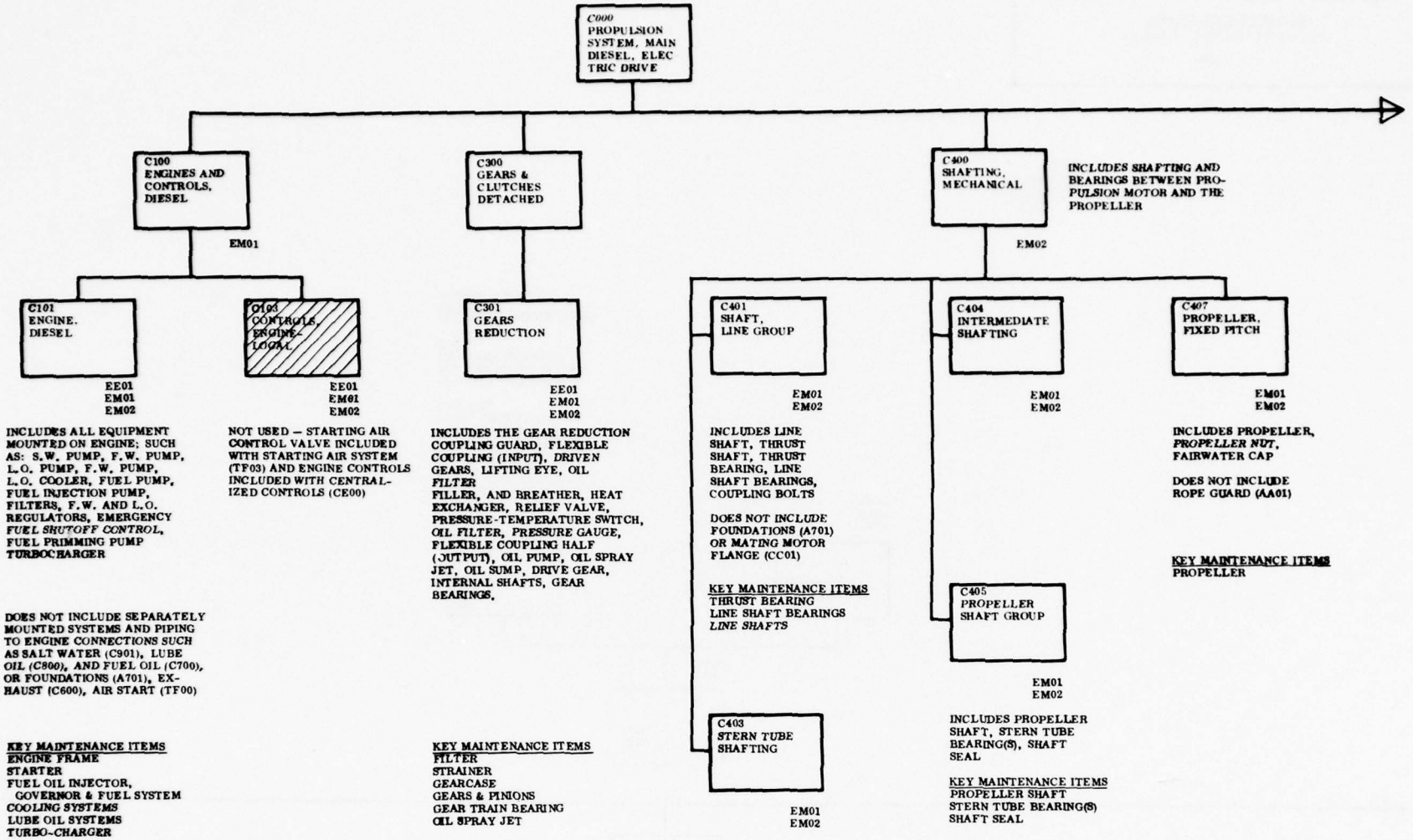
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

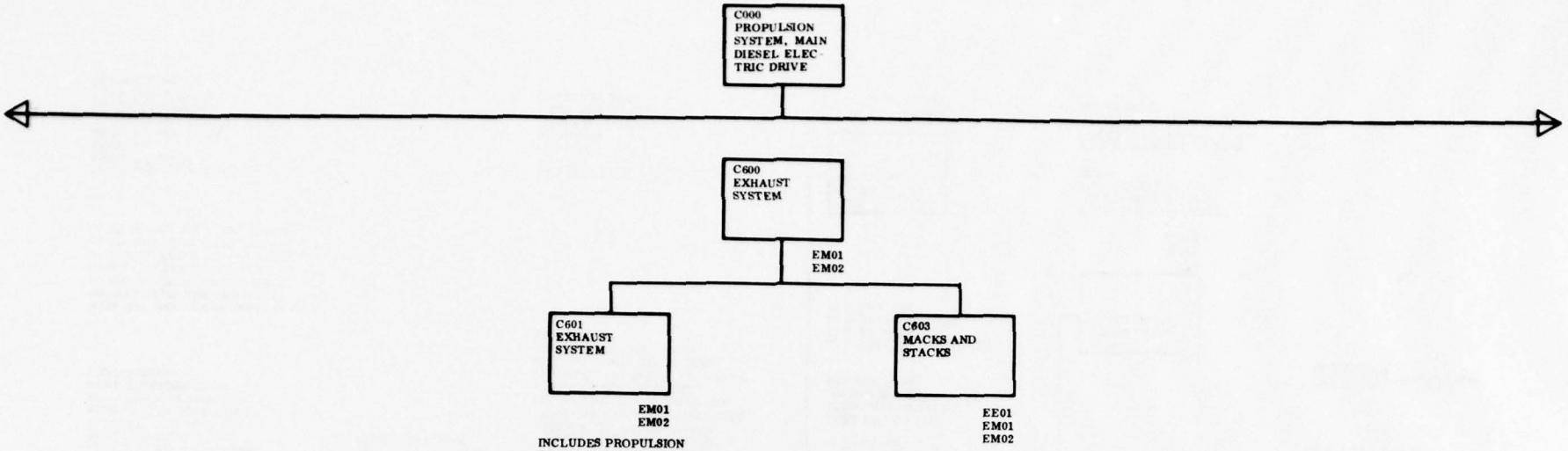
A000 HULL-STRUCTURE
AD00 - AE00



ARS 7, 38

EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

C000 PROPULSION SYSTEM, MAIN DIESEL, ELECTRIC DRIVE
C100 - C400



INCLUDES PROPULSION DIESEL EXHAUST PIPING BETWEEN ENGINE EXHAUST FLANGE AND SIDE SHELL OVERBOARD DISCHARGE FLANGE, MUFFLER, INSULATION AND LAGGING.

DOES NOT INCLUDE S.W. COOLING PIPING TO OR FROM THE MUFFLER (C901).

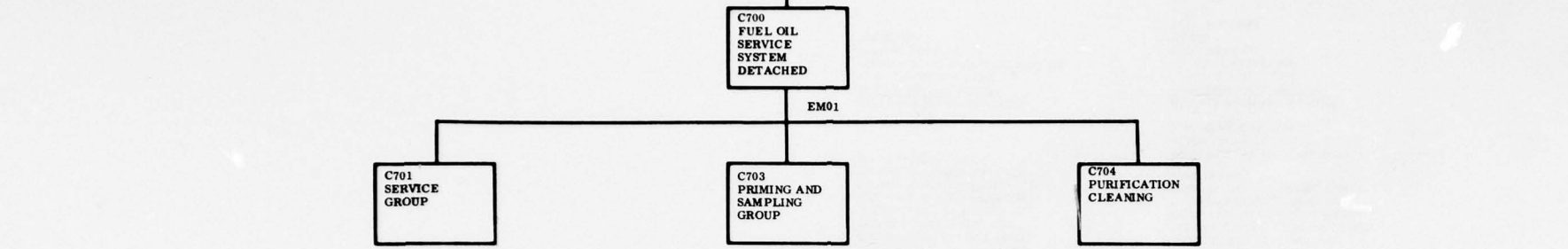
KEY MAINTENANCE ITEMS
MUFFLER
FLEXIBLE PIPING

ARS 7, 38

EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

C000 PROPULSION SYSTEM, MAIN DIESEL, ELECTRIC DRIVE

C600 EXHAUST SYSTEM



EM01
EE01

INCLUDES F.O. SERVICE PUMP, MOTOR, CONTROLLER AND ASSOCIATED WIRING UP TO THE POWER PANEL. ALSO INCLUDES THE F.O. SERVICE PIPING FROM AND INCLUDING THE F.O. SERVICE TANKS TO THE FOLLOWING EQUIPMENT: ALL FOUR MAIN ENGINES, UP TO THE MOTOR BOAT FILL STATION, THE 100KW AND 200KW DIESEL GENERATORS, F.O. SETTLING TANKS, GALLEY RANGE, BOILER AND PIPING FROM BUT NOT INCLUDING THE SUCTION AND TRANSFER MANIFOLDS. PIPING RUNS INCLUDE THE ATTACHED FLOW METERS, VALVES, FITTINGS, GAGES, STRAINERS AND FILTERS. ALSO INCLUDES VENT PIPING FROM F.O. SERVICE TANK AND F.O. RETURN PIPING FROM DIESEL ENGINES AND BOILER TO SERVICE TANK

DOES NOT INCLUDE F.O. SUCTION AND TRANSFER MANIFOLDS (TD04) OR PIPING AND FILLINGS FOR HAND PUMP (C703), F.O. PURIFIER (C704), F.O. FILL AND TRANSFER SYSTEM (TD00), F.O. SETTLING TANK (A904) OR FOUNDATIONS (A703)

KEY MAINTENANCE ITEMS
F.O. SERVICE PUMP
MOTOR AND CONTROLLER
F.O. FLOW METERS
F.O. SERVICE PUMP RELIEF VALVE
LIQUID LEVEL INDICATORS
VALVES
PIPING

EE01
EM01

INCLUDES F.O. HAND PUMP AND F.O. HAND PUMP SUCTION AND DISCHARGE PIPING AND VALVES.

KEY MAINTENANCE ITEM
F.O. HAND PUMP

EM01
EE01

INCLUDES F.O. PURIFIER, MOTOR CONTROLLER, WIRING FROM POWER PANEL, AND ATTACHED PIPING AND VALVES; F.O. DRIP SUMP TANKS, PIPING AND VALVES BETWEEN THE F.O. DRIP SUMP TANKS AND THE F.O. PURIFIER; VENTS FROM THE F.O. DRIP SUMP TANK; DRAIN PIPING BETWEEN THE EQUIPMENT AND THE F.O. DRIP SUMP TANKS; AND THE DRAIN PIPING AND VALVES BETWEEN F.O. SERVICE TANKS, F.O. PURIFIER AND THE SLUDGE TANK (C704)

DOES NOT INCLUDE SLUDGE TANK (C805) OR FOUNDATIONS

KEY MAINTENANCE ITEMS
F.O. PURIFIER
F.O. PURIFIER MOTOR AND CONTROLLER
TANKS

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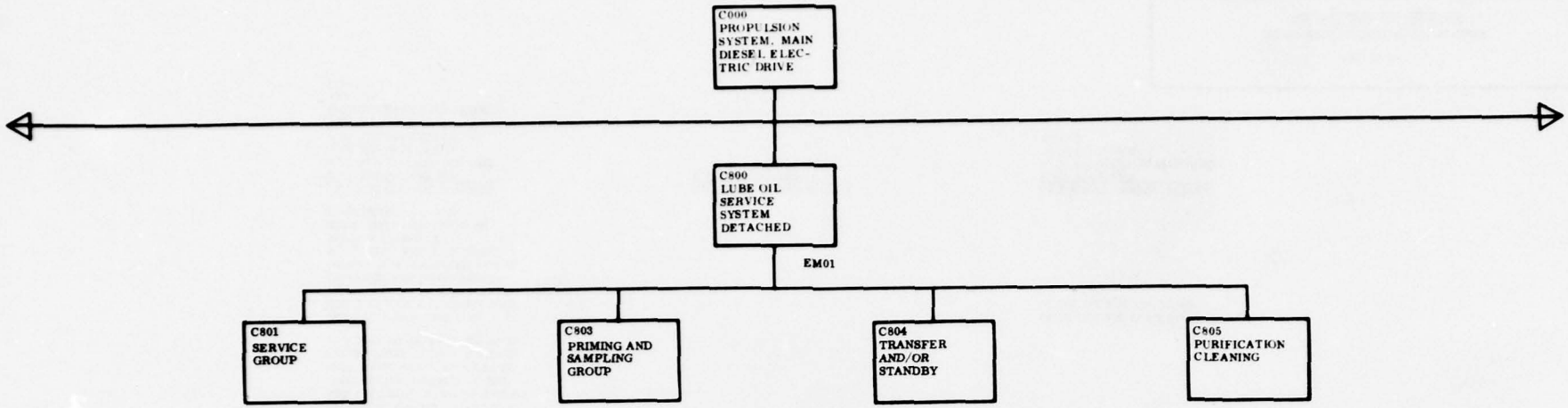
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

C000 PROPULSION SYSTEM, MAIN DIESEL, ELECTRIC DRIVE
C700 FUEL OIL SERVICE SYSTEM DETACHED



INCLUDES 25 GPM MOTOR DRIVEN TRANSFER PUMP, MOTOR, CONTROLLER AND WIRING FROM POWER PANEL; MANIFOLD; PIPING FROM THE SUCTION SIDE OF THE HAND PUMP AND VALVES INCLUDING HAND FILL CONNECTION; PIPING AND VALVES BETWEEN L.O. STOWAGE TANKS, DECK FILL AND DISCHARGE CONNECTIONS, 25 GPM MOTOR DRIVEN L.O. TRANSFER PUMP, AND THE MANIFOLD AND THE L.O. STOWAGE TANK VENT AND OVERFLOW PIPING.

DOES NOT INCLUDE PIPING AND ACCESSORIES BETWEEN THE MANIFOLD AND THE EQUIPMENT SERVED (C805), THE L.O. PIPING ATTACHED TO THE ENGINES (C101), L.O. STOWAGE TANKS (A904) OR FOUNDATIONS (A703).

KEY MAINTENANCE ITEMS
25 GPM MOTOR DRIVEN
L.O. TRANSFER PUMP
PUMP MOTOR AND CONTROLLER
25 GPM HAND PUMP
STRAINER

INCLUDES MAIN PROPULSION ENGINE FILTERS AND PIPING AND VALVES BETWEEN ENGINES AND FILTERS; L.O. PURIFIER, MOTOR, CONTROLLER AND WIRING TO POWER PANEL; 10 GPM HAND PUMP, L.O. HEATER, STEAM CUTOUT VALVES, TRAPS AND PIPING FROM AND INCLUDING THE SETTLING TANK TO THE CONTAMINATE OIL TANK, L.O. HEATERS, SLUDGE TANK, PURIFIER, 10 GPM HAND PUMP AND ON TO THE OVERBOARD DISCHARGE; VENT PIPING FROM SETTLING TANK, CONTAMINATED OIL TANK AND SLUDGE TANK. ALSO INCLUDES PIPING FROM THE L.O. MANIFOLD (DISCHARGE SIDE) TO THE SEVEN (7) ENGINES SUMPS AND DRAINS.

DOES NOT INCLUDE MANIFOLD (C804) OR FOUNDATIONS (A703), L.O. COOLERS (C101).

KEY MAINTENANCE ITEMS
L.O. PURIFIER, MOTOR AND CONTROLLER
10 GPM HAND PUMP
L.O. HEATER
TANKS
L.O. FILTERS
PIPING
VALVES

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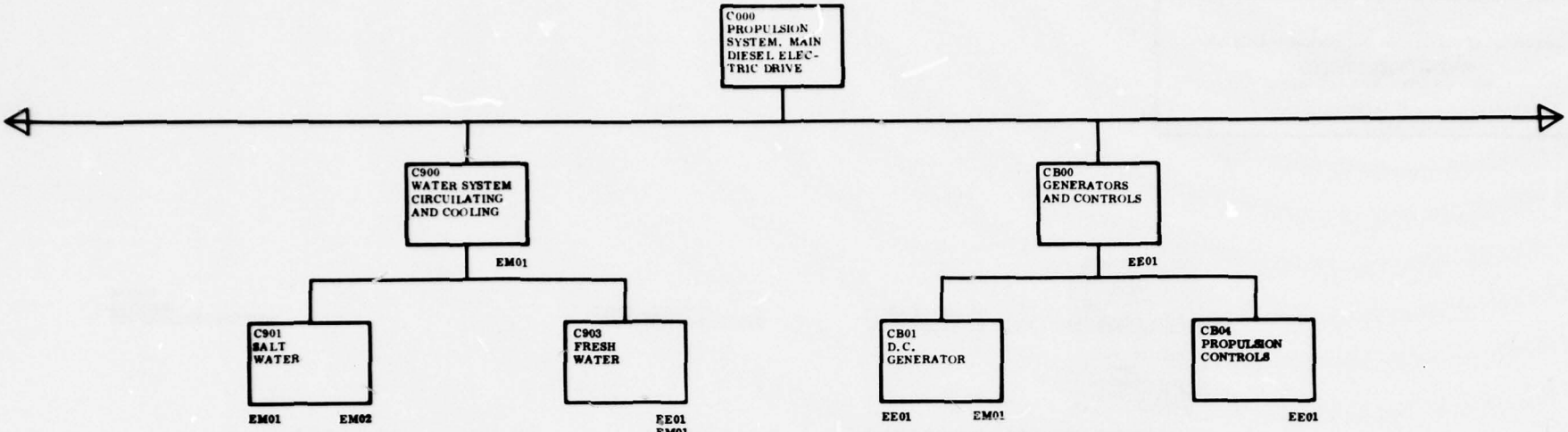
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

C000 PROPULSION SYSTEM, MAIN DIESEL ELECTRIC DRIVE
C800 LUBE OIL SERVICE SYSTEM DETACHED



INCLUDES S.W. PIPING AND ACCESSORIES FOR MAIN PROPULSION DIESEL ENGINE COOLING FROM SUCTION SEA CHEST VALVES TO ENGINES; FROM ENGINES TO MUFFLERS AND OVERBOARD DISCHARGE VALVES; AND S.W. DISCHARGE FROM MUFFLERS TO MUFFLER S.W. OVERBOARD DISCHARGE VALVE.

DOES NOT INCLUDE MUFFLERS (C601) OR S.W. COOLING PIPING FROM FIREMAIN SERVING THRUST BEARING AND AIR COMPRESSORS (T806) OR FIREMAIN (T801) OR FW/SW COOLER FROM MN ENGS.

KEY MAINTENANCE ITEMS
STRAINERS
VALVES

INCLUDES ARMATURE, STATOR, BEARING, AND EXCITOR AND MOUNTED ACCESSORIES SUCH AS BEARING LUBE OIL TEMPERATURE THERMOMETER, OIL SIGHT FLOW INDICATOR AND L.O. SUMP TANK.

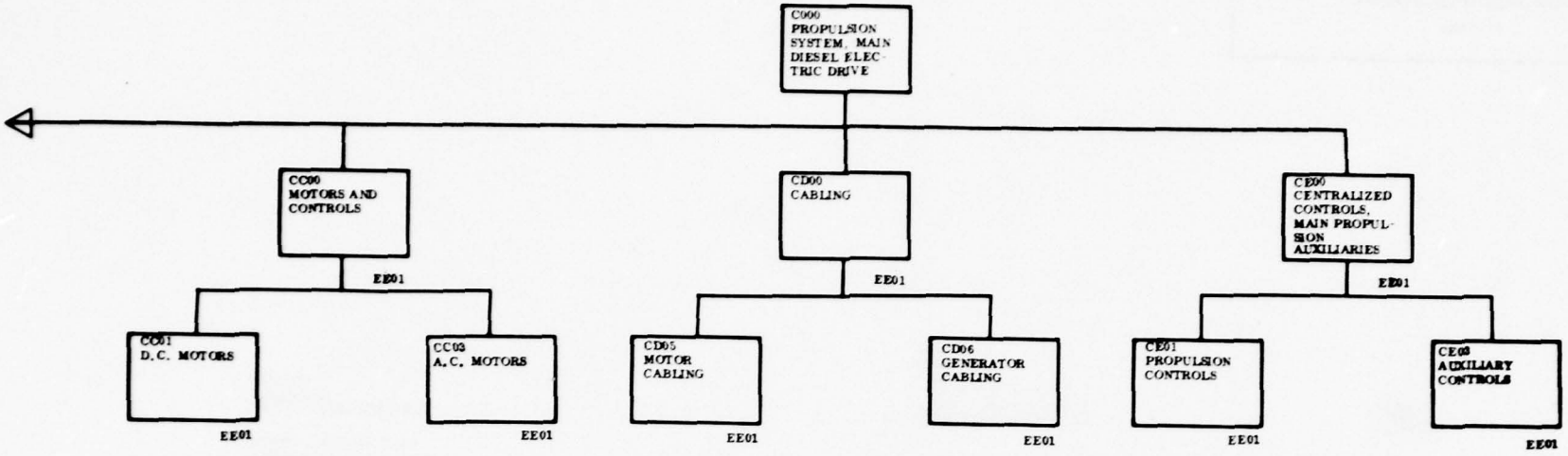
DOES NOT INCLUDE EXTERNAL ELECTRIC CABLE (CD06), L.O. OIL PIPING (C101) WHICH CONNECTS TO ENGINE.

KEY MAINTENANCE ITEMS
COMMUTATORS, BRUSHES AND BRUSH RIGGING
BEARINGS
GENERATOR
EXCITOR

ARS 7, 38

EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

C000 PROPULSION SYSTEM, MAIN DIESEL ELECTRIC DRIVE
C900 - CB00



INCLUDES STATOR FRAME, ARMATURE, PEDESTAL BEARINGS, COMMUTATOR, BRUSHES AND BRUSH RIGGING, ALSO INCLUDES MAIN MOTOR MATING FLANGE.

DOES NOT INCLUDE POWER CABLE (CD05) OR FOUNDATIONS (A701) OR CONTROLS (CE01)

KEY MAINTENANCE ITEMS
BEARINGS
MOTOR

INCLUDES POWER CABLE FROM MAIN PROPULSION CONTROL CABINET TO PROPULSION MOTOR

DOES NOT INCLUDE WIRING FROM PROPULSION CONTROL CABINET TO MOTOR FIELD TERMINALS (CE01)

KEY MAINTENANCE ITEMS
CABLE TERMINALS

INCLUDES POWER CABLE FROM PROPULSION GENERATOR TO MAIN PROPULSION CONTROL CABINET

DOES NOT INCLUDE WIRING FROM CONTROL CABINET TO GENERATOR EXCITER (CE01)

KEY MAINTENANCE ITEMS
CABLE TERMINALS

INCLUDES GENERATOR PANEL ASSEMBLY, MOTOR PANEL ASSEMBLY, PILOT HOUSE DESK, PILOT HOUSE PANEL AND ALL EQUIPMENT MOUNTED ON THEM EXCEPT SHAFT RPM INDICATOR (M60F) AND ENGINE ORDER TELEGRAPH (M602), ENGINE RPM (M60U), ENGINE TEMP (M61L). ALSO INCLUDES INTERCONNECTING CONTROL WIRING BETWEEN CABINETS, PILOT HOUSE EQUIPMENT, PROPULSION GENERATOR EXCITOR AND PROPULSION MOTOR FIELDS.

DOES NOT INCLUDE 240 VDC SUPPLY CABLE TO PROPULSION CONTROL CABINETS (4400) OR FOUNDATIONS.

KEY MAINTENANCE ITEMS
SET-UP SWITCHES
CONTACTORS
RHEOSTATS
GAGES AND METERS
CONTROL SWITCHES

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EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

C000 PROPULSION SYSTEM, MAIN DIESEL ELECTRIC DRIVE
CC00 - CE00

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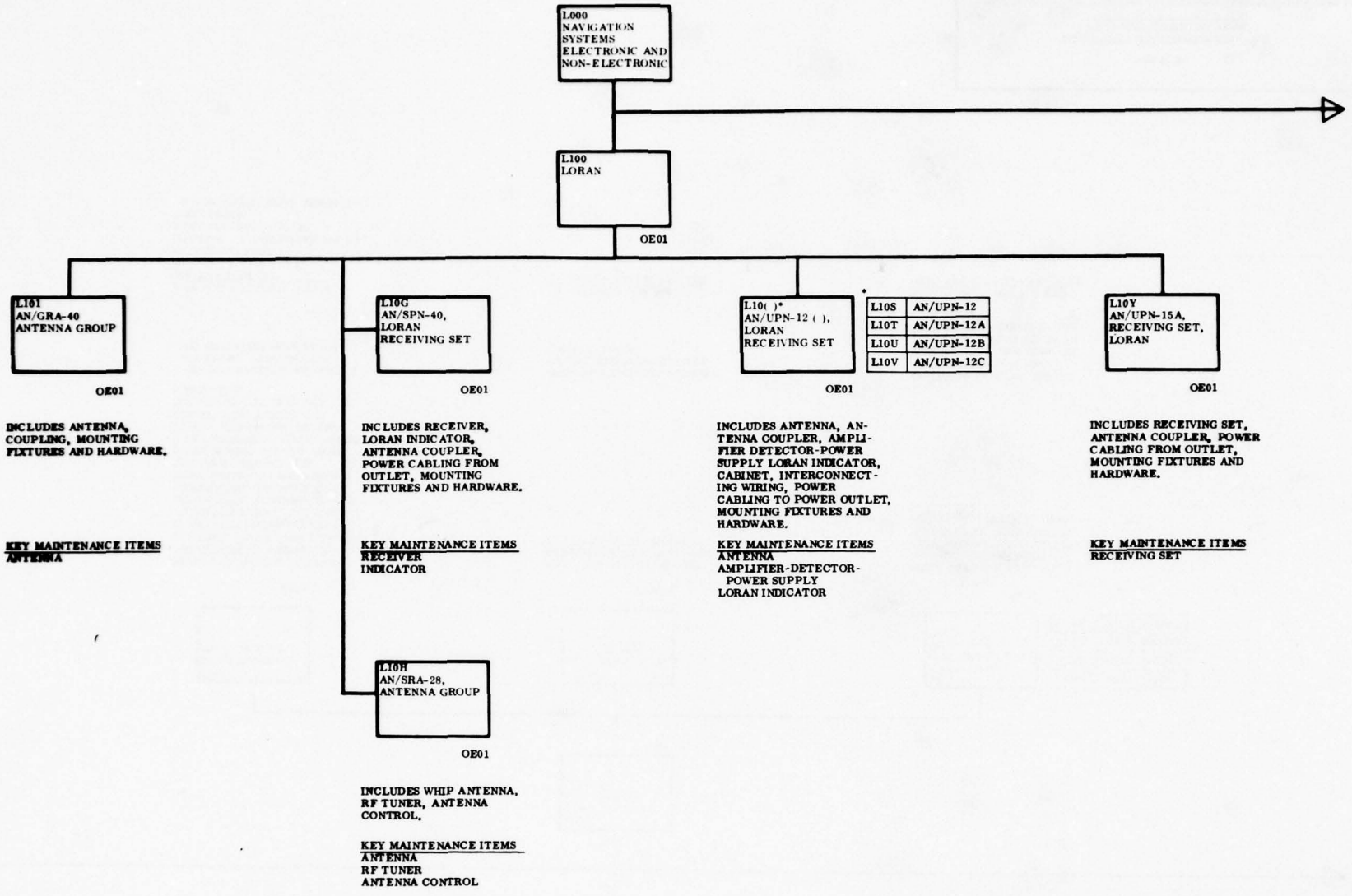
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

G000 GUN SYSTEMS

GD00 GUN MOUNTS



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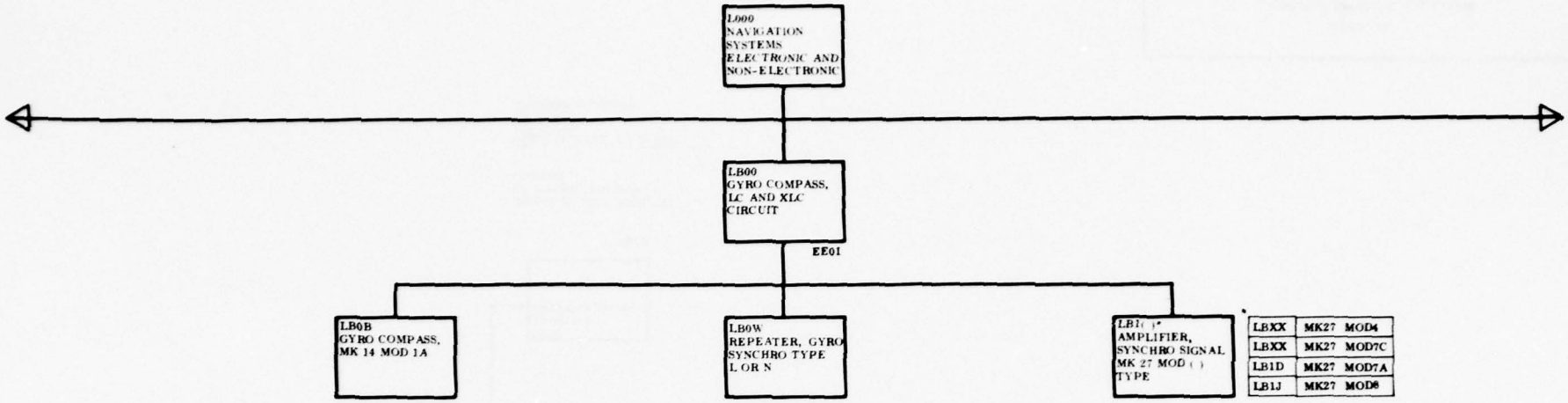
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

L000 NAVIGATION SYSTEMS ELECTRONIC AND NON-ELECTRONIC
L100 LORAN



INCLUDES MASTER COMPASS AND BINNACLE ASSEMBLY, CONTROL PANEL, FOLLOW-UP PANEL AMPLIFIER, SUPPLY TRANSFER PANEL, VOLTAGE REGULATOR, COMPASS MOTOR GENERATOR, STORAGE BATTERY WIRING TO AND FROM L C. SWITCHBOARD (SEE 410E), WIRING TO AND FROM GYRO REPEATER AND SYNCHRO SIGNAL AMPLIFIER, INTERCONNECTING WIRING AND MOUNTING FIXTURE, AND HARDWARE.

DOES NOT INCLUDE REPEATER (SEE LB0W), SYNCHRO SIGNAL AMPLIFIER (SEE LB1( )).

KEY MAINTENANCE ITEMS
MASTER COMPASS
BINNACLE ASSEMBLY
CONTROL PANEL
FOLLOW-UP AMPLIFIER PANEL
VOLTAGE REGULATOR
BATTERIES
MOTOR-GENERATOR ASSEMBLY

INCLUDES GYRO SYNCHRO REPEATERS, MOUNTING FIXTURES AND HARDWARE.

DOES NOT INCLUDE WIRING FROM GYRO COMPASS (SEE LB0A OR LB0B).

KEY MAINTENANCE ITEMS
GYRO SYNCHRO REPEATER

INCLUDES CASE AND COVER ASSEMBLY, ELECTRONIC UNIT AND MECHANICAL UNIT, INTERCONNECTING CABLE, MOUNTING FIXTURES, AND HARDWARE.

DOES NOT INCLUDE WIRING FROM OR TO GYRO COMPASS SYSTEM (SEE LB0A OR LB0B), OR WIRING FROM OR TO L C. SWITCHBOARD (SEE 410E).

KEY MAINTENANCE ITEMS
SYNCHRO SIGNAL AMPLIFIER

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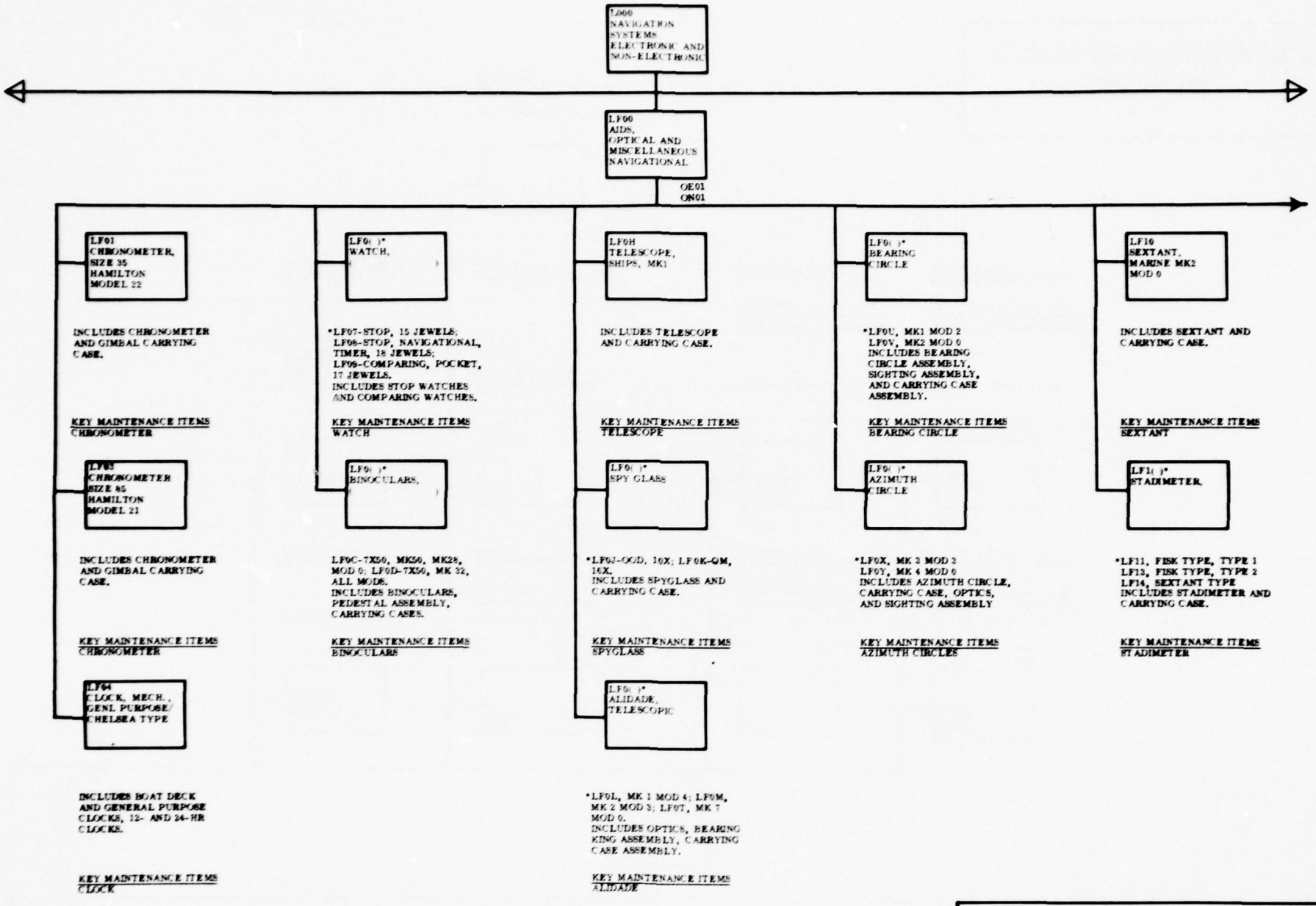
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

L000 NAVIGATION SYSTEMS ELECTRONIC AND NON-ELECTRONIC
LB00 GYRO COMPASS, LC AND XLC CIRCUIT



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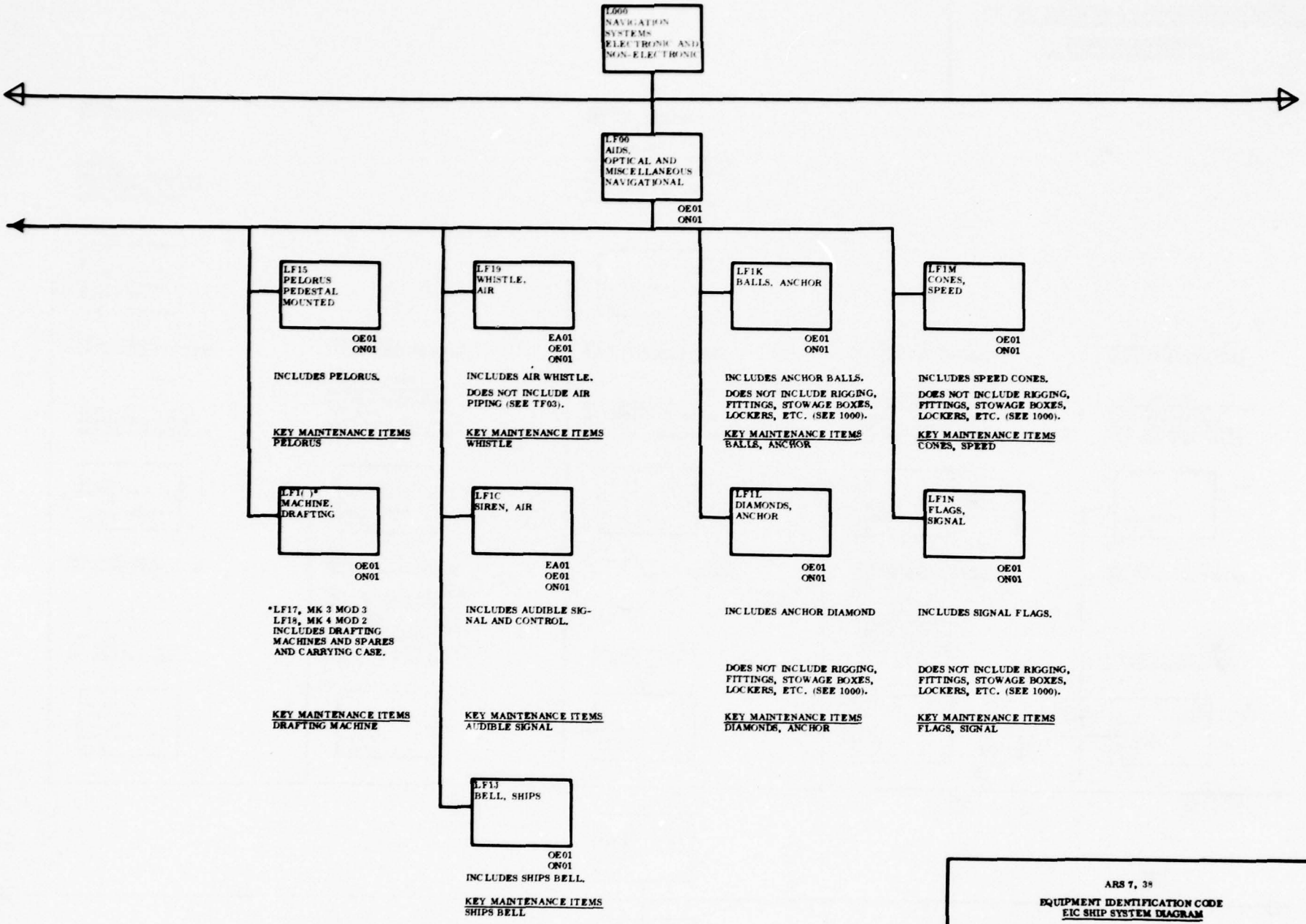
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

L000 NAVIGATION SYSTEMS ELECTRONIC AND NON-ELECTRONIC
LF00 AIDS, OPTICAL AND MISCELLANEOUS NAVIGATIONAL



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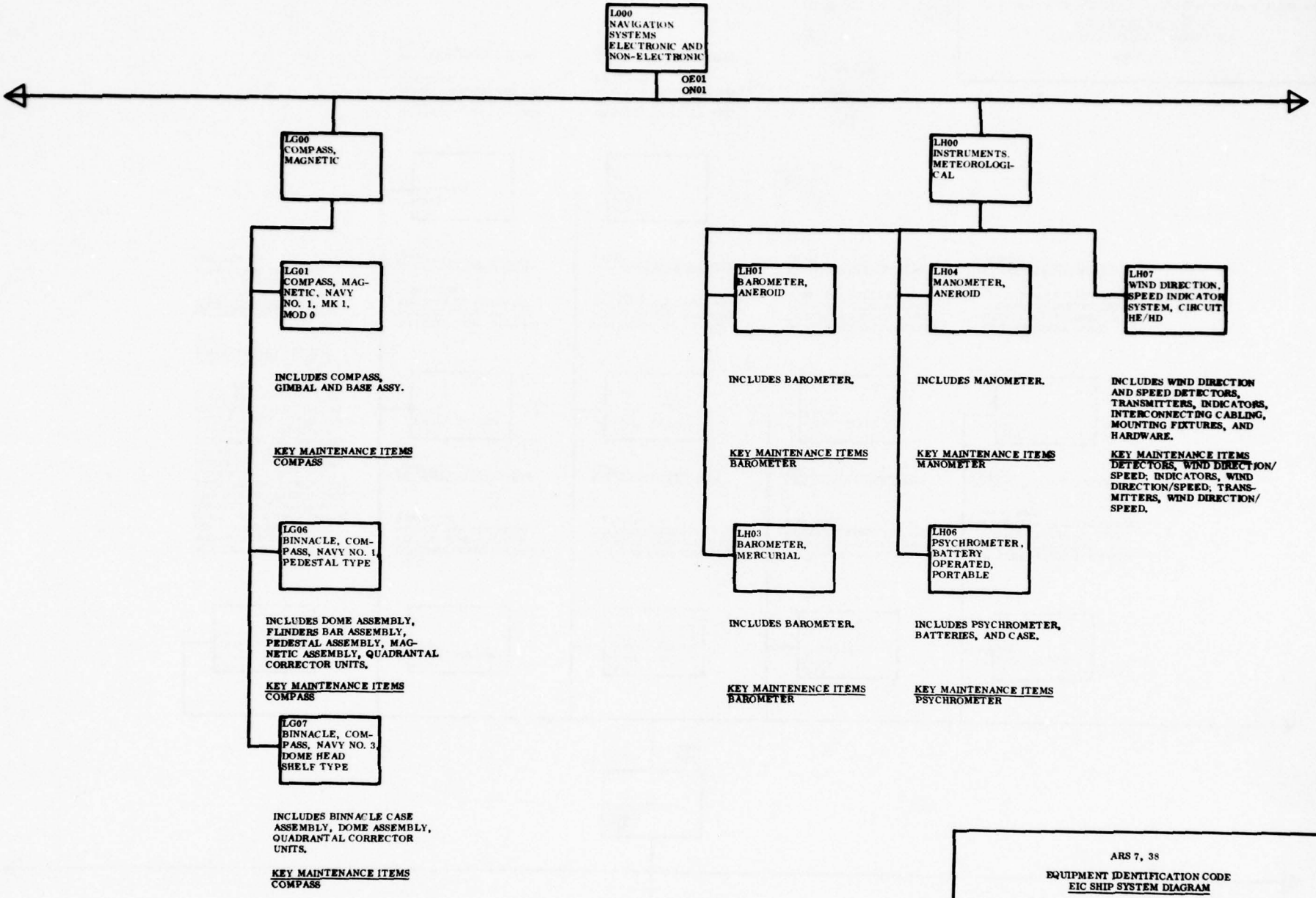
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

L000 NAVIGATION SYSTEMS ELECTRONIC AND NON-ELECTRONIC
LF00 AIDS, OPTICAL AND MISCELLANEOUS NAVIGATIONAL



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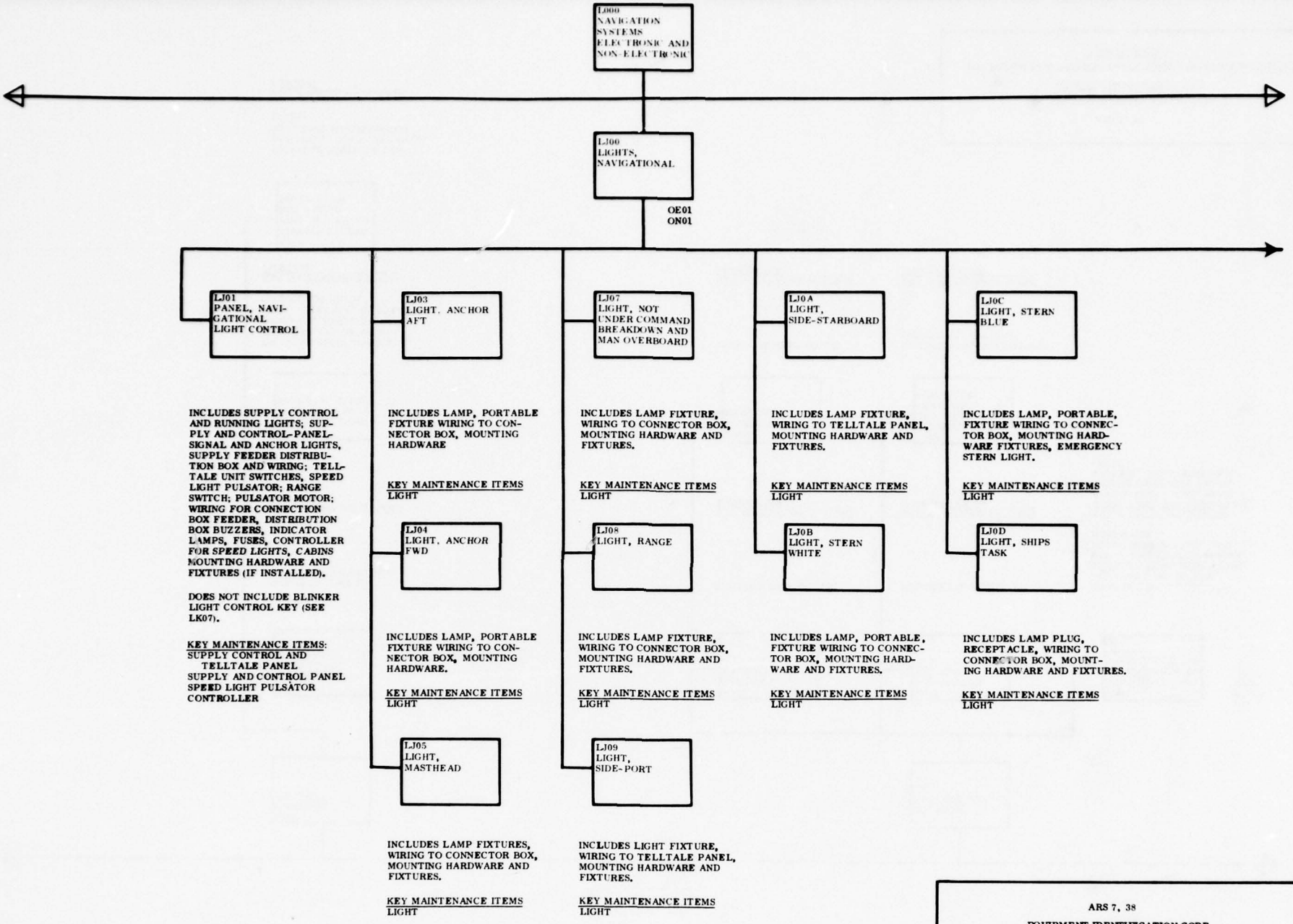
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

L000 NAVIGATION SYSTEMS ELECTRONIC AND NON-ELECTRONIC
LG00 - LH00



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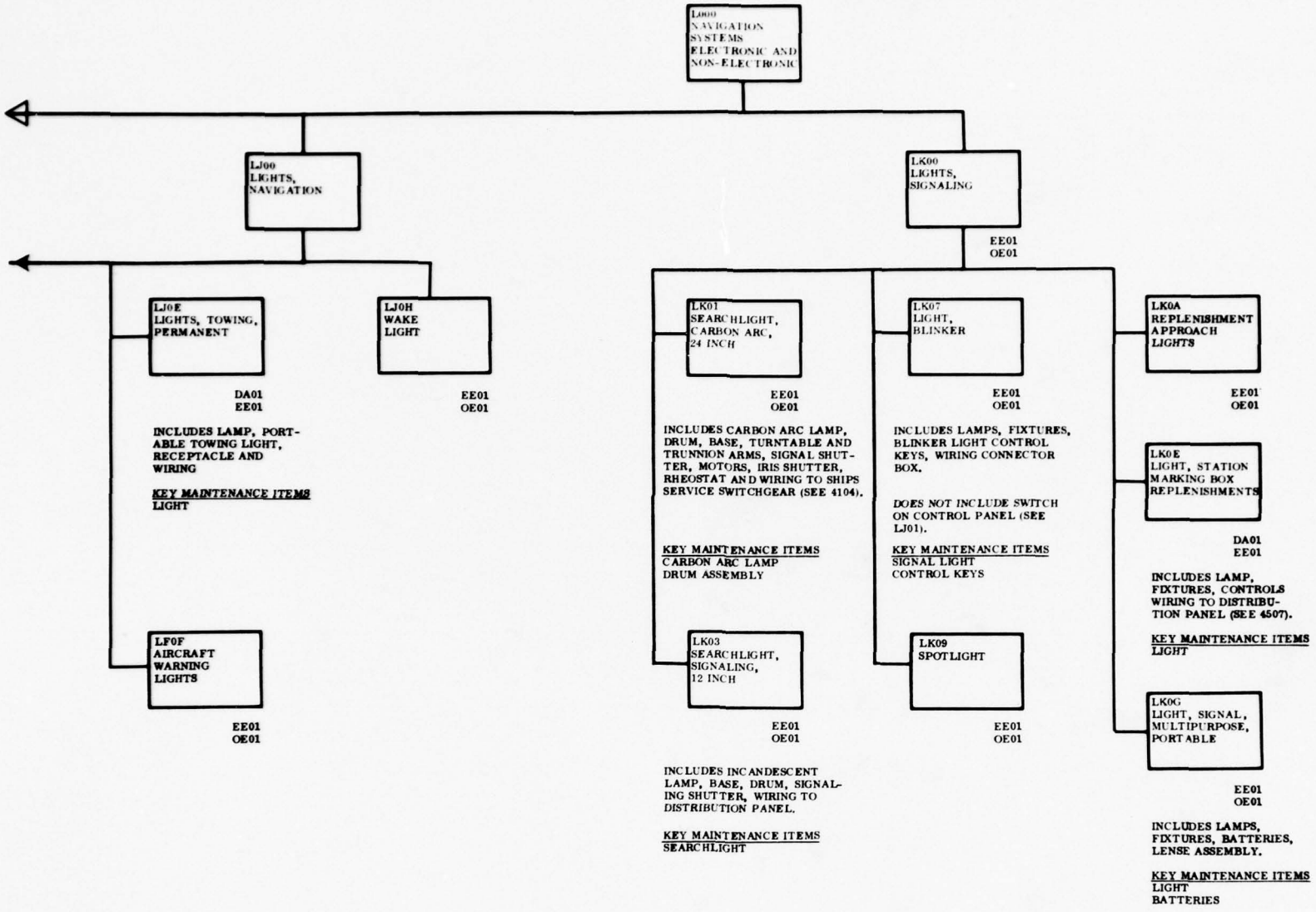
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

L000 NAVIGATION SYSTEMS ELECTRONIC AND NON-ELECTRONIC
LJ00 LIGHTS, NAVIGATIONAL



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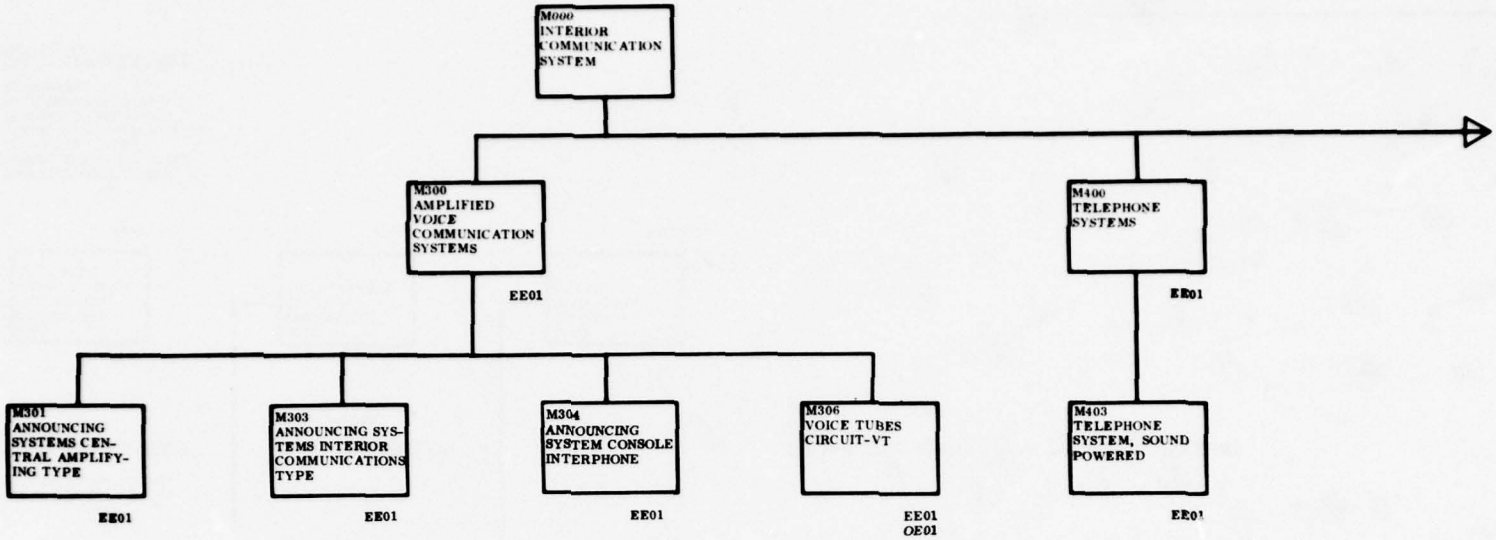
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

L000 NAVIGATION SYSTEMS ELECTRONIC AND NON-ELECTRONIC
LJ00 - LK00

51/52 BLANK



INCLUDES CIRCUIT 1 MC, AN/PIC-2A, GENERAL & CHEMICAL ATTACK ALARM CIRCUITS, COLLISION ALARM CIRCUIT CA; AMPLIFIER-OSCILLATOR GROUP, MICROPHONE CONTROL STATION, PORTABLE MICROPHONES, LOUDSPEAKERS, WIRING TO AND FROM IC SWITCHBOARD (SEE 4108), INTERCONNECTING WIRING, MOUNTING FIXTURES AND HARDWARE.

KEY MAINTENANCE ITEMS
MICROPHONE CONTROL STATION
MICROPHONES
LOUDSPEAKERS

INCLUDES CIRCUIT 21 MC; CONTROL BOXES, KEY UNITS, AMPLIFIERS, LOUDSPEAKERS, MICROPHONES, INTERCONNECTING WIRING, WIRING FROM MAIN IC SWITCHBOARD (SEE 4108), MOUNTING FIXTURES AND HARDWARE.

KEY MAINTENANCE ITEMS
KEY UNIT TYPE TALKING
KEY UNIT TYPE LISTENING
MICROPHONES

INCLUDES HINGE COVERED MOUTHPIECES, MEGAPHONE VOICE TUBING, MOUNTING FIXTURES AND HARDWARE, CALLBELL SYSTEMS, BUZZER, BELLS, HORNS, RELAYS, PUSHBUTTONS, INTERCONNECTING WIRING, WIRING FROM IC MAIN SWITCHBOARD (SEE 4108).

KEY MAINTENANCE ITEMS
VOICE TUBING
CALLBELL SYSTEM

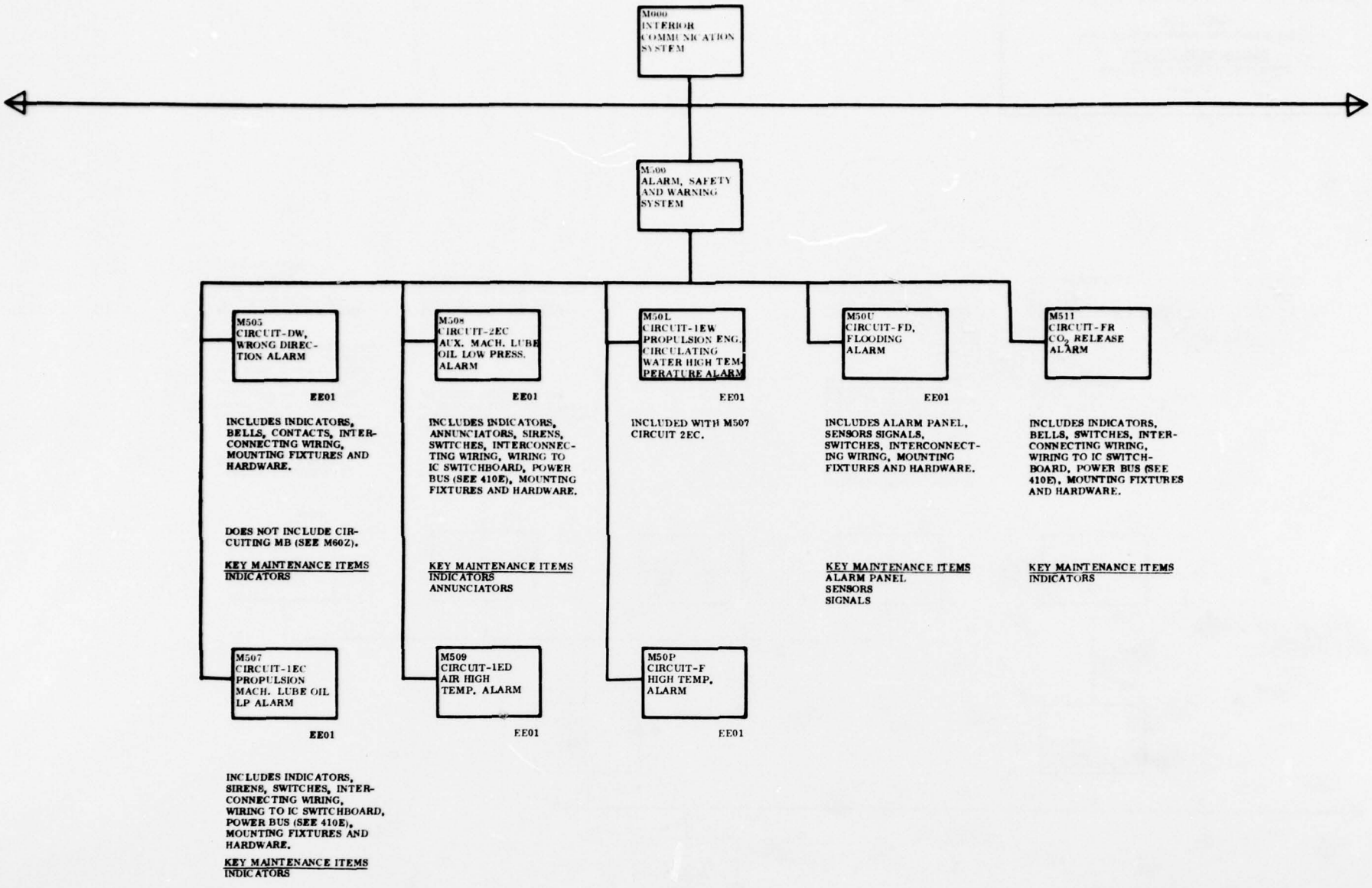
INCLUDES CIRCUITS 1JV, X1JV, X1J, JX, X6J, X40J, AND CALLBELL CIRCUIT; AMPLIFIER, HANDSET, HEADSET, JACKBOX SWITCH BOX, HORNS, CALL SIGNAL UNIT, INTERCONNECTING WIRING, MOUNTING FIXTURES AND HARDWARE.

KEY MAINTENANCE ITEMS
HANDSET
HEADSET
CALL SIGNAL UNIT

ARS 7, 38

EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

M000 INTERIOR COMMUNICATION SYSTEM
M300 - M400



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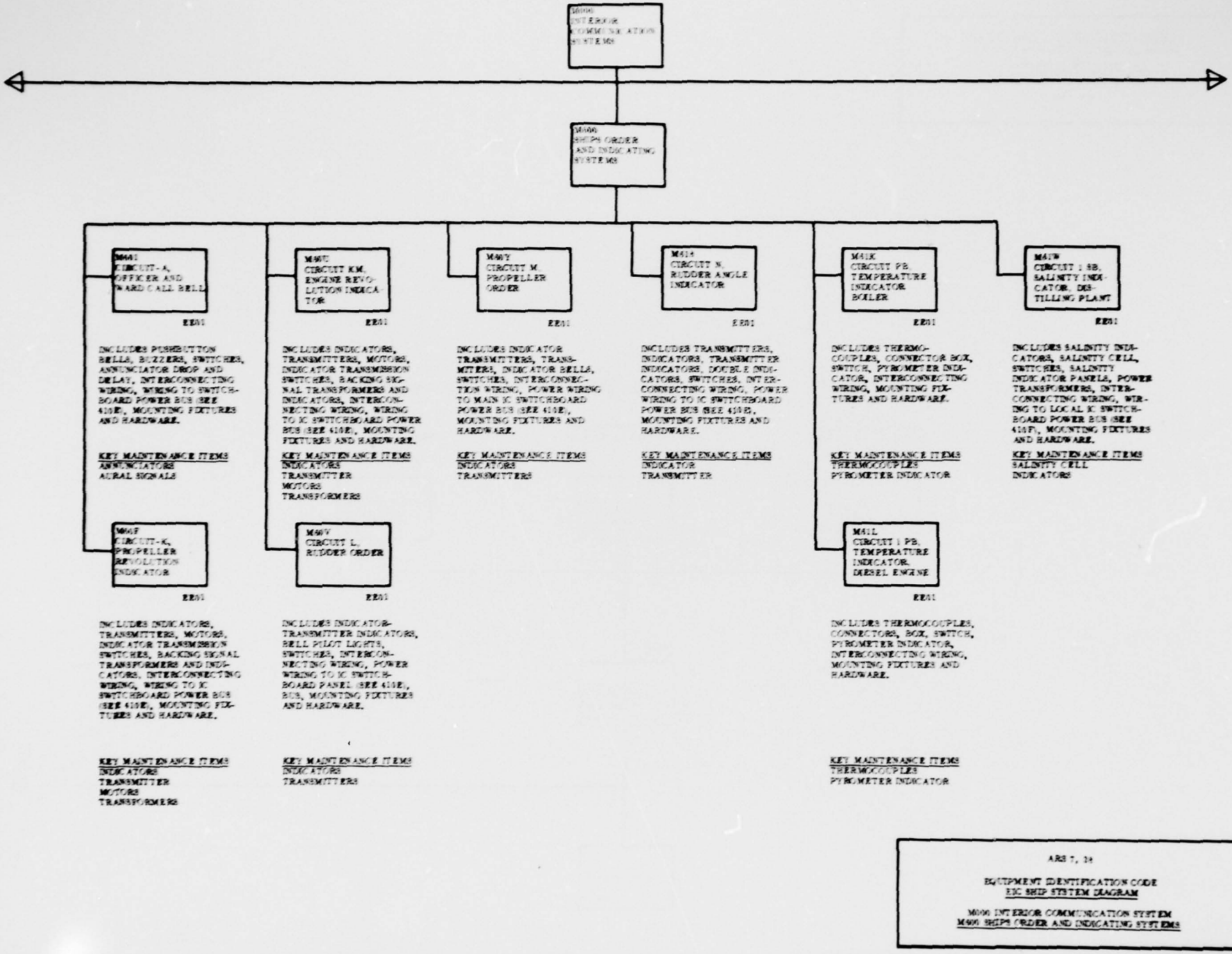
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

M000 INTERIOR COMMUNICATION SYSTEM
M500 ALARM, SAFETY AND WARNING SYSTEM



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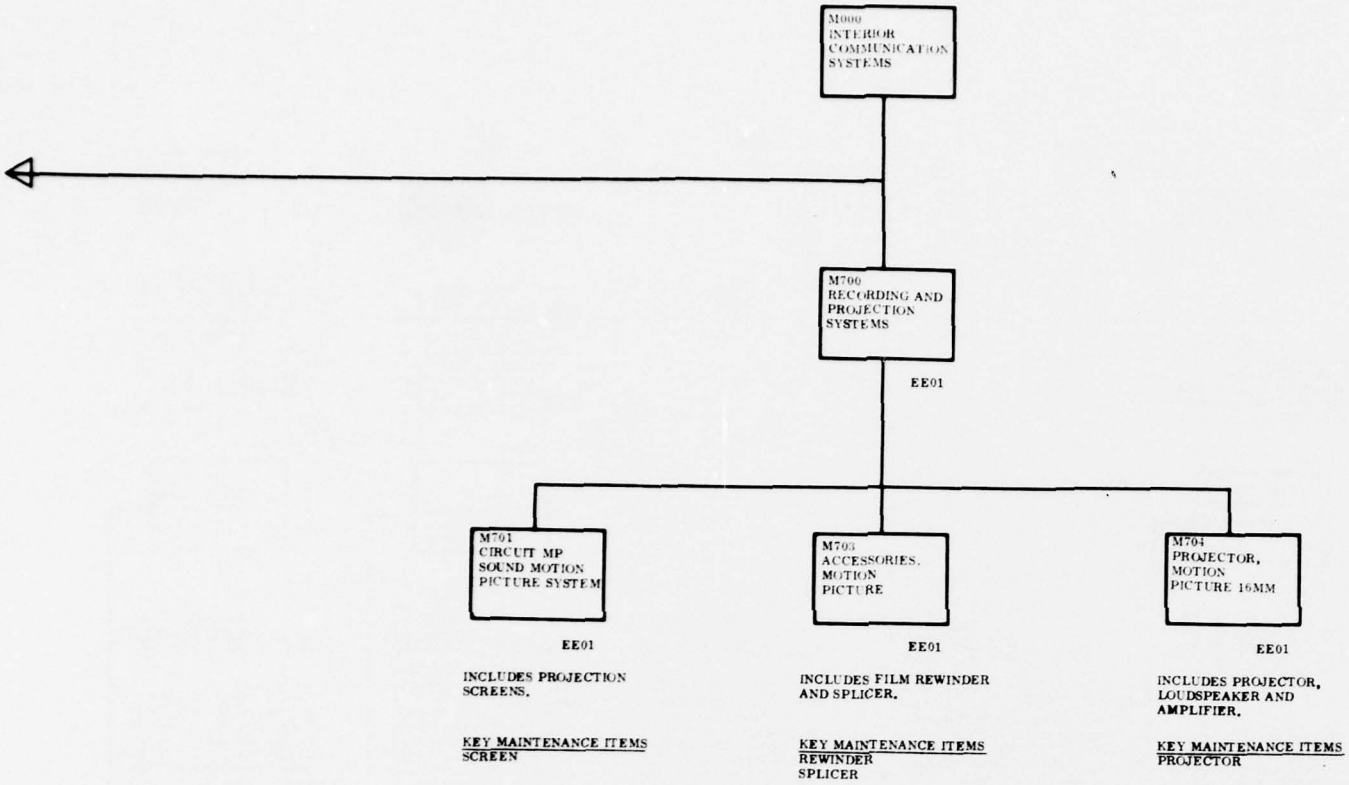
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

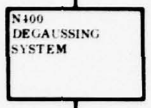
M000 INTERIOR COMMUNICATION SYSTEM
M400 SHIPS ORDER AND INDICATING SYSTEMS



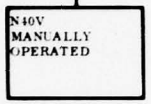
ARS 7, 38

EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

M000 INTERIOR COMMUNICATION SYSTEMS
M700 RECORDING AND PROJECTION SYSTEMS



EE01
ON01



EE01
ON01

INCLUDES REMOTE CONTROL EQUIPMENT, LOCAL CONTROL EQUIPMENT, RHEOSTATS, CABLE INSTALLATION, COMPASS COMPENSATING EQUIPMENT, DEGAUSSING SWITCHBOARD, TERMINAL CONNECTION BOXES.

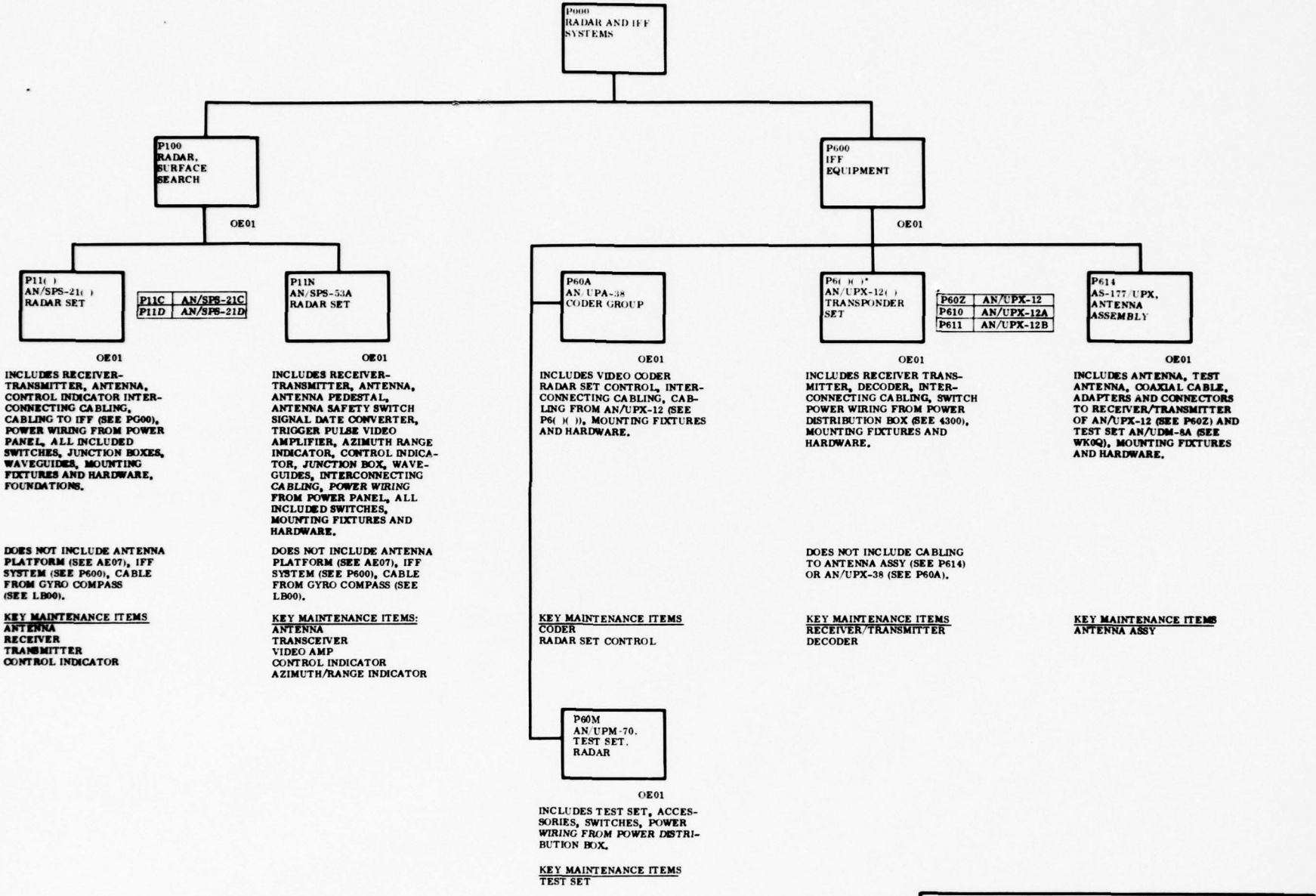
DOES NOT INCLUDE WIRING FROM SHIPS SERVICE DISTRIBUTION SWITCHBOARD TO DEGAUSSING SWITCHBOARD (SEE 430B).

KEY MAINTENANCE ITEMS
COILS
CONTROL EQUIPMENT
COMPASS COMPENSATING EQUIPMENT
DEGAUSSING SWITCHBOARD

ARS 7, 38

EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

N000 COUNTERMEASURE SYSTEM ELECTRONIC/NON-ELECTRONIC
N400 DEGAUSSING SYSTEM



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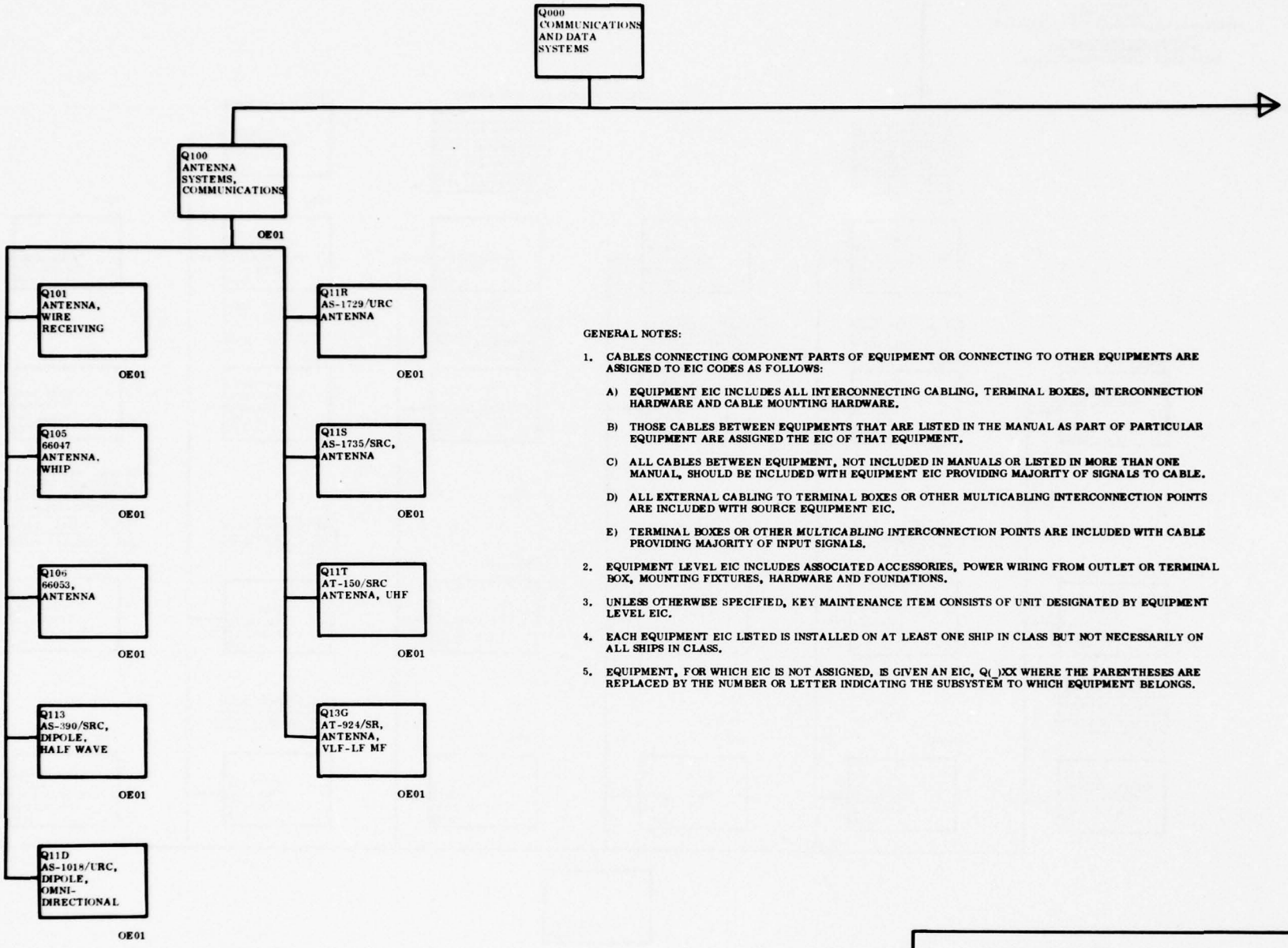
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

P000 RADAR AND IFF SYSTEMS
P100 - P600

59/60 BLANK



GENERAL NOTES:

1. CABLES CONNECTING COMPONENT PARTS OF EQUIPMENT OR CONNECTING TO OTHER EQUIPMENTS ARE ASSIGNED TO EIC CODES AS FOLLOWS:
   - A) EQUIPMENT EIC INCLUDES ALL INTERCONNECTING CABLING, TERMINAL BOXES, INTERCONNECTION HARDWARE AND CABLE MOUNTING HARDWARE.
   - B) THOSE CABLES BETWEEN EQUIPMENTS THAT ARE LISTED IN THE MANUAL AS PART OF PARTICULAR EQUIPMENT ARE ASSIGNED THE EIC OF THAT EQUIPMENT.
   - C) ALL CABLES BETWEEN EQUIPMENT, NOT INCLUDED IN MANUALS OR LISTED IN MORE THAN ONE MANUAL, SHOULD BE INCLUDED WITH EQUIPMENT EIC PROVIDING MAJORITY OF SIGNALS TO CABLE.
   - D) ALL EXTERNAL CABLING TO TERMINAL BOXES OR OTHER MULTICABLING INTERCONNECTION POINTS ARE INCLUDED WITH SOURCE EQUIPMENT EIC.
   - E) TERMINAL BOXES OR OTHER *MULTICABLING* INTERCONNECTION POINTS ARE INCLUDED WITH CABLE PROVIDING MAJORITY OF INPUT SIGNALS.
2. EQUIPMENT LEVEL EIC INCLUDES ASSOCIATED ACCESSORIES, POWER WIRING FROM OUTLET OR TERMINAL BOX, MOUNTING FIXTURES, HARDWARE AND FOUNDATIONS.
3. UNLESS OTHERWISE SPECIFIED, KEY MAINTENANCE ITEM CONSISTS OF UNIT DESIGNATED BY EQUIPMENT LEVEL EIC.
4. EACH EQUIPMENT EIC LISTED IS INSTALLED ON AT LEAST ONE SHIP IN CLASS BUT NOT NECESSARILY ON ALL SHIPS IN CLASS.
5. EQUIPMENT, FOR WHICH EIC IS NOT ASSIGNED, IS GIVEN AN EIC, Q(_)XX WHERE THE PARENTHESES ARE REPLACED BY THE NUMBER OR LETTER INDICATING THE SUBSYSTEM TO WHICH EQUIPMENT BELONGS.

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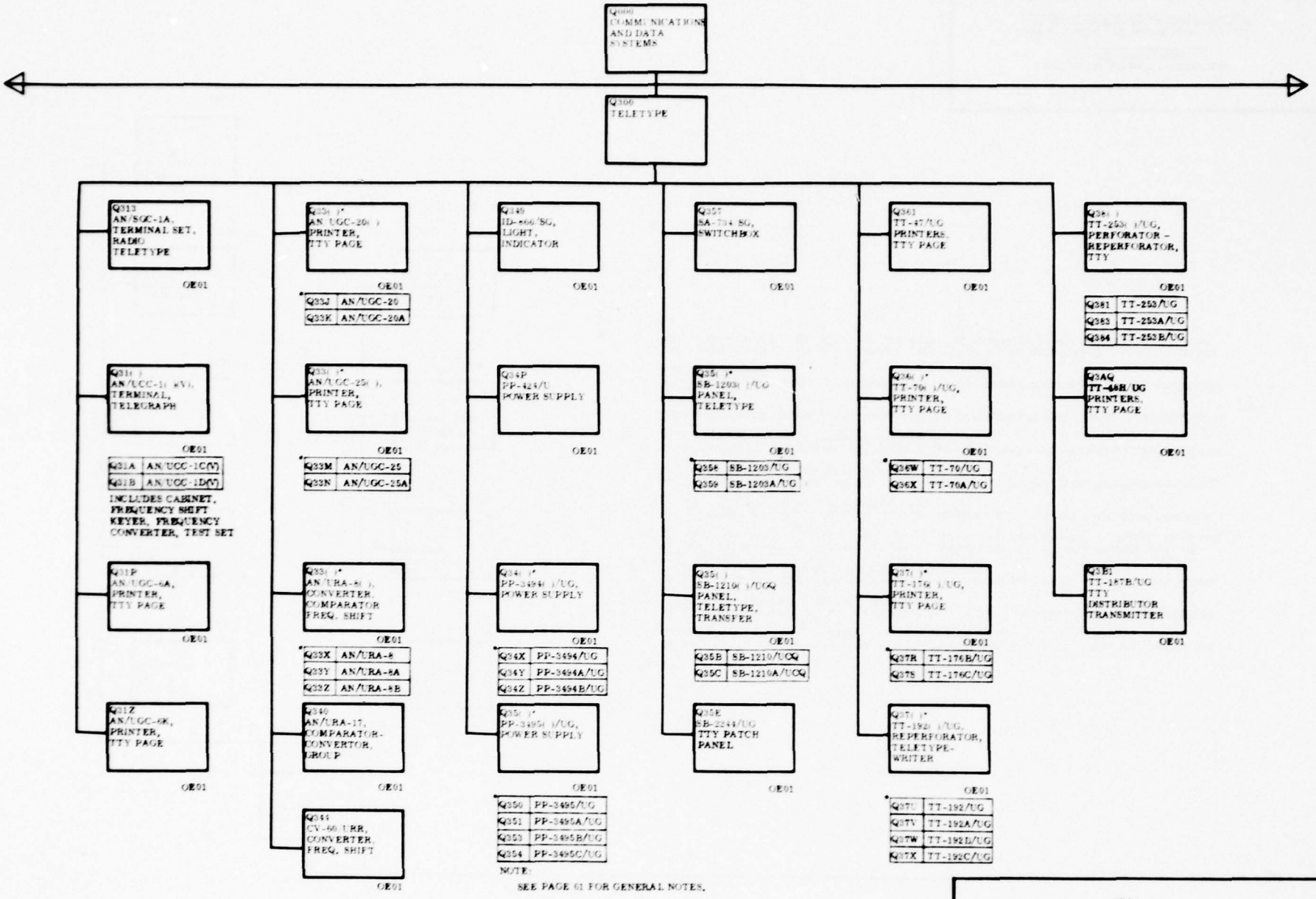
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

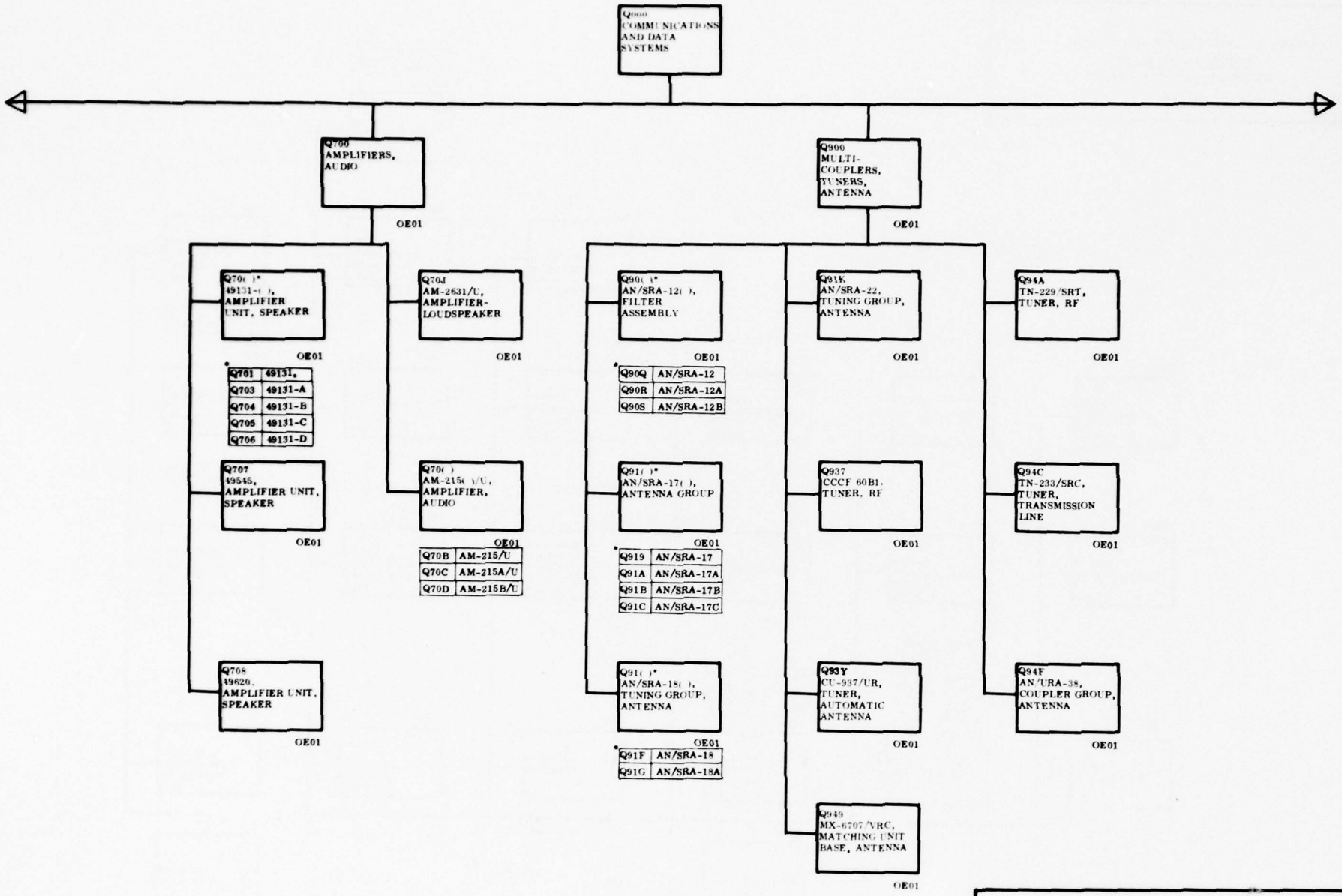
Q000 COMMUNICATIONS AND DATA SYSTEMS
Q100 ANTENNA SYSTEMS, COMMUNICATIONS



ARS 7, 3*

EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

Q000 COMMUNICATIONS AND DATA SYSTEMS
Q300 TELETYPE



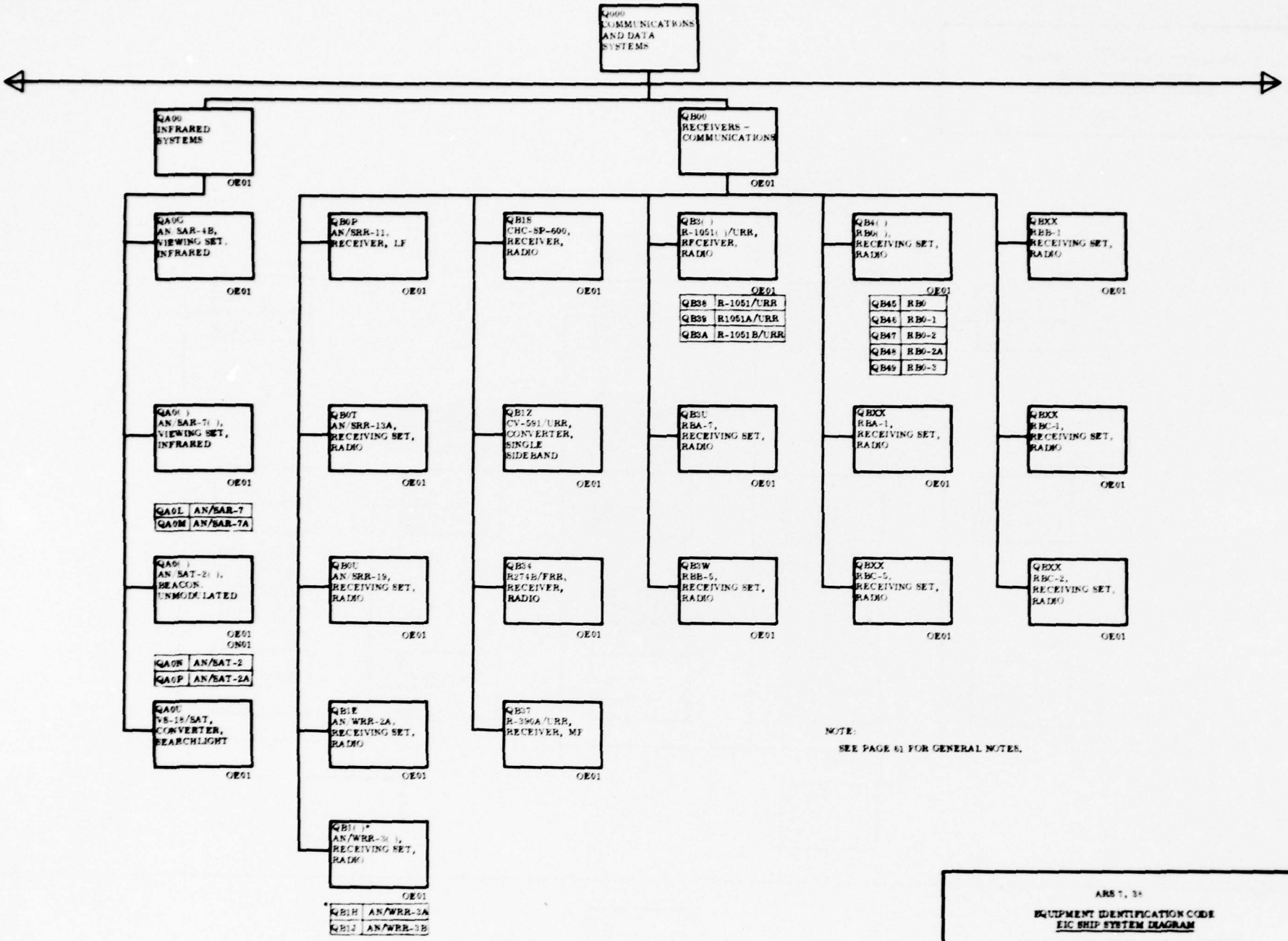
NOTE:

SEE PAGE 61 FOR GENERAL NOTES.

ARS 7, 38

EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

Q000 COMMUNICATIONS AND DATA SYSTEMS
Q700 - Q800



NOTE:

SEE PAGE 61 FOR GENERAL NOTES.

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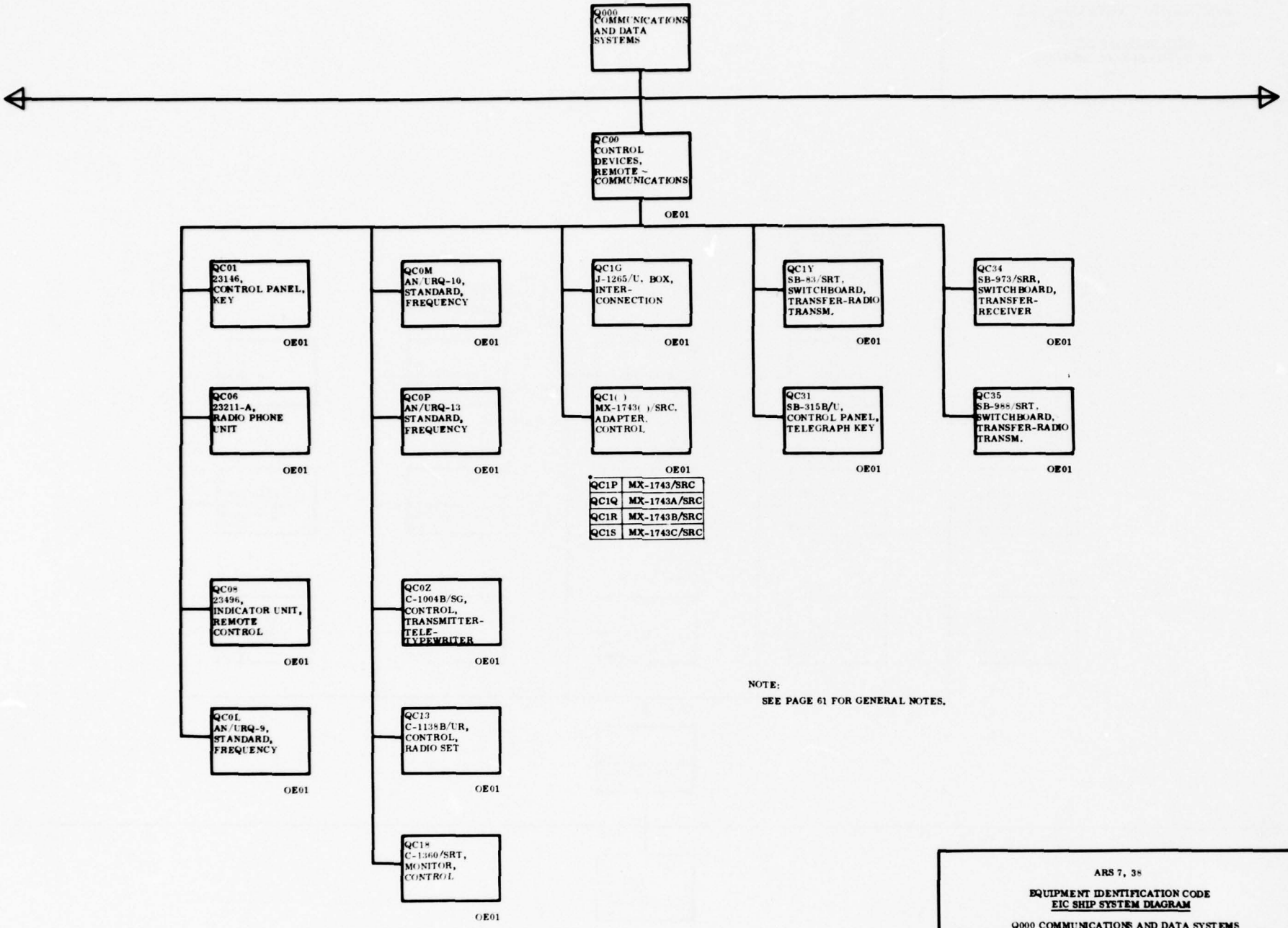
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

Q000 COMMUNICATIONS AND DATA SYSTEMS
QA00 - QB00



NOTE:

SEE PAGE 61 FOR GENERAL NOTES.

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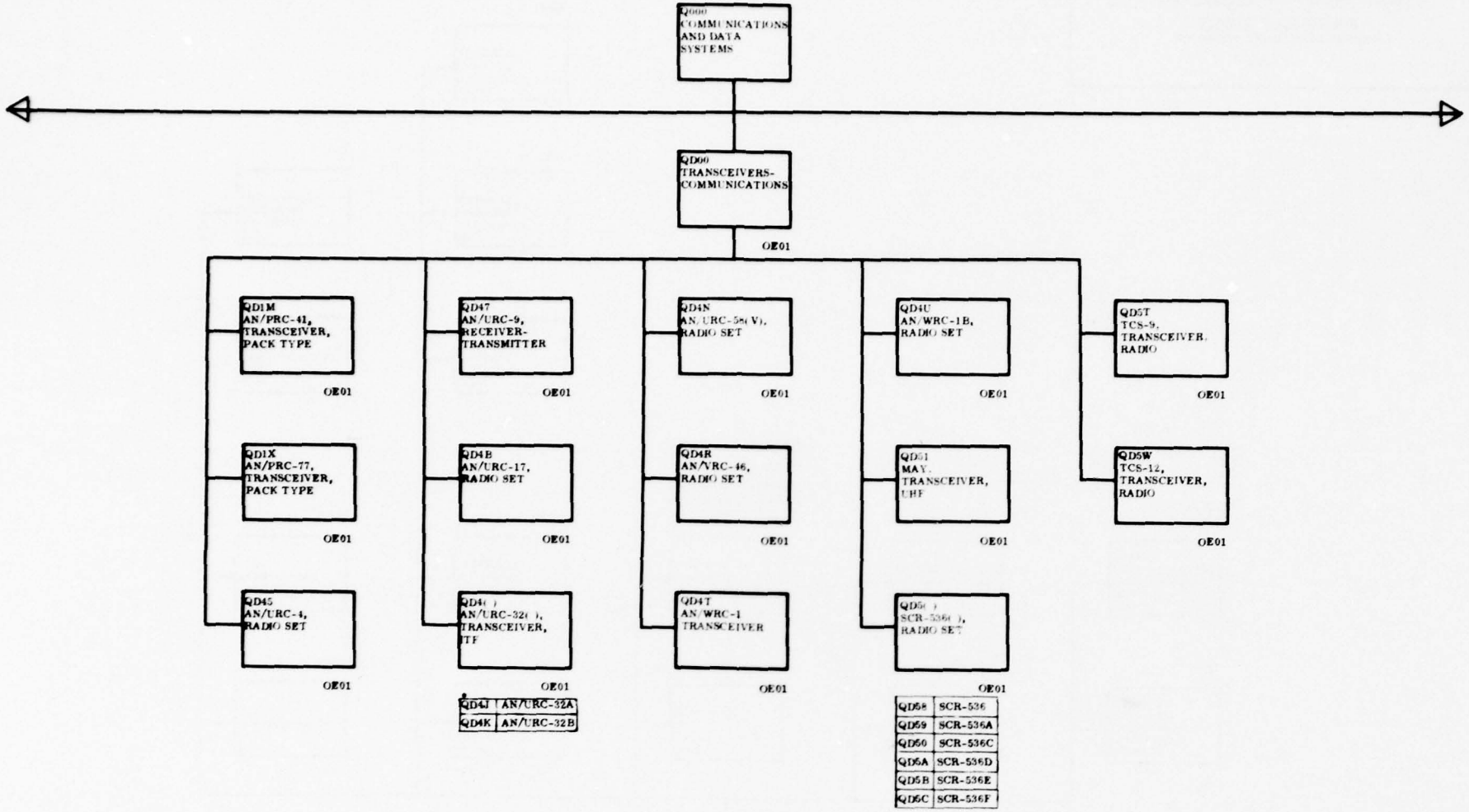
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

Q000 COMMUNICATIONS AND DATA SYSTEMS
QC00 CONTROL DEVICES, REMOTE - COMMUNICATIONS



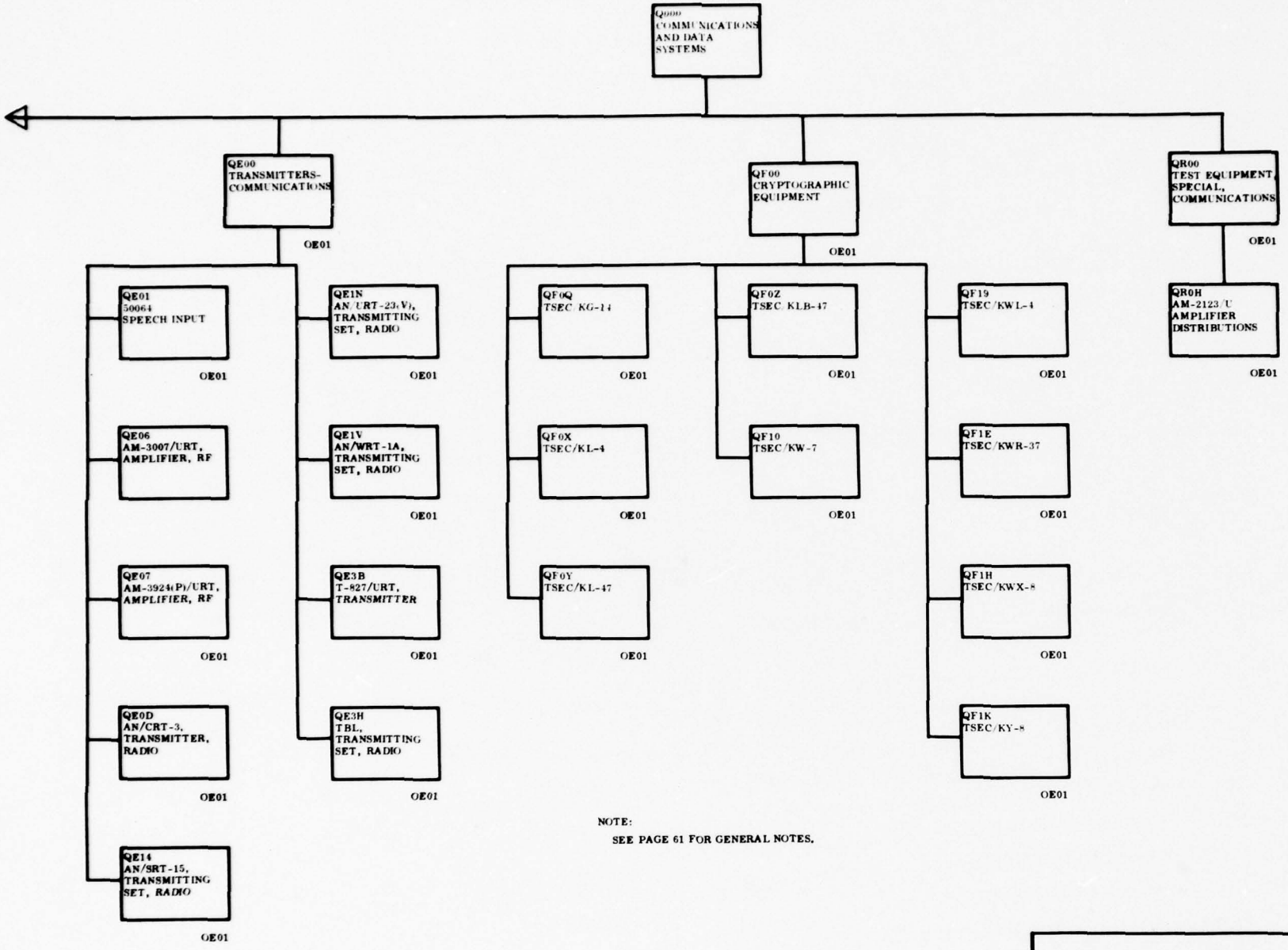
NOTE:

SEE PAGE 61 FOR GENERAL NOTES.

ARS 7, 3ª

EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

Q000 COMMUNICATIONS AND DATA SYSTEMS
QD00 TRANSCEIVERS - COMMUNICATIONS



NOTE:

SEE PAGE 61 FOR GENERAL NOTES.

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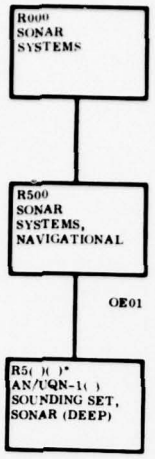
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

Q000 COMMUNICATIONS AND DATA SYSTEMS
QE00 - QR00



R50P	AN/UQN-1C
R50Q	AN/UQN-1D
R50R	AN/UQN-1E
R50S	AN/UQN-1F
R50T	AN/UQN-1G
R50U	AN/UQN-1H
R50V	AN/UQN-1J

INCLUDES RECEIVER/ TRANSMITTER, TRANSDUCER, INTERCONNECTING CABLING (CIRCUIT R-SS), POWER CABLE TO DISTRIBUTION BOX, (INCLUDING ROTARY SNAP SWITCH) FOUNDATIONS AND MOUNTING HARDWARE.

KEY MAINTENANCE ITEMS
RECEIVER/TRANSMITTER, SONAR
AT 200A, TRANSDUCER, SONAR

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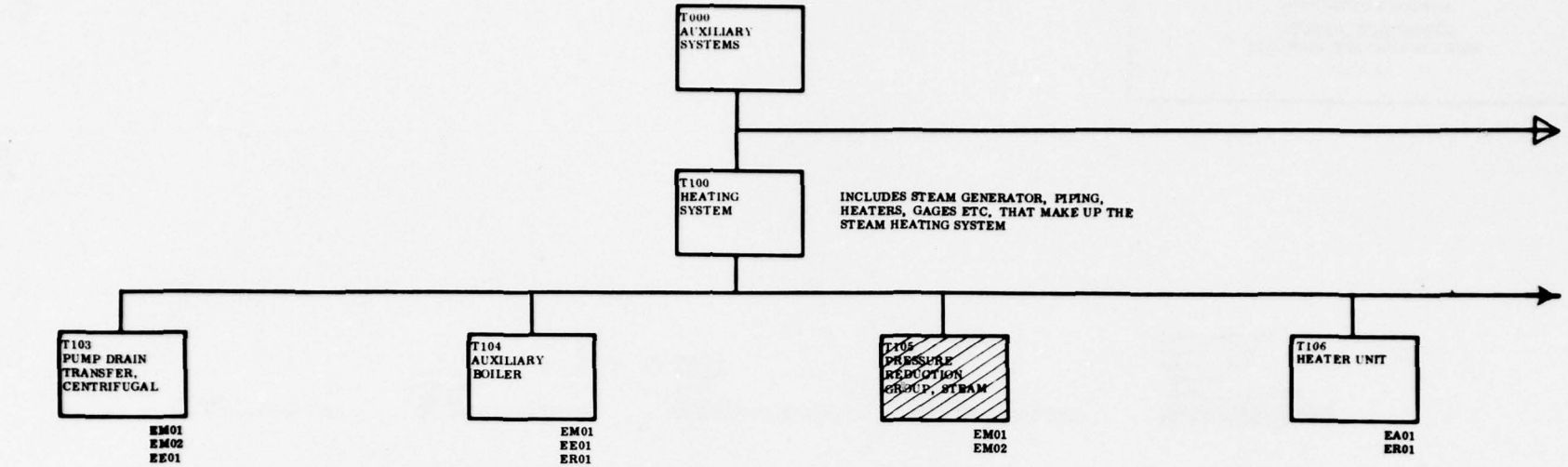
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

R000 SONAR SYSTEMS
R500 SONAR SYSTEMS, NAVIGATIONAL



INCLUDES CONDENSATE RETURN PUMP, PIPING TO FIRST FLANGE OR FITTING, PUMP MOTOR AND CONTROLLER, ELECTRICAL CABLE FROM THE POWER PANEL, AND PRESSURE GAGE.

DOES NOT INCLUDE FLOAT SWITCH, CONTROLLING PUMP (T10D).

INCLUDES THE COMPLETE STEAM GENERATOR INSTALLATION CONSISTING OF THE STEAM GENERATOR, COMBINED FEED WATER AND RECIRCULATING PUMP WITH ITS CONTROLLER, PRESSURE SWITCH, STACK SWITCH, PUMP MOTORS AND FUEL PUMP, GAGES, ACCUMULATOR, BLOWER AND BURNER ASSEMBLY, FLUE PIPING AND SMOKE STACK. ALSO INCLUDED ARE THE VARIOUS INTAKE, BLOWDOWN, STEAM SUPPLY AND DRAIN VALVES AND COCKS, SAFETY VALVE, BLOWDOWN AND DRAIN PIPING AND ELECTRICAL CABLING FROM THE POWER PANEL. FEED WATER PIPING FROM THE FIRST FLANGE OR FITTING OFF THE CONDENSATE RETURN PUMP TO THE FEED AND FILTER TANK, AND FROM THIS TANK TO THE BOILER FEED PUMP; THE RESERVE FEED TANK AND THE FEED AND FILTER TANK AND THEIR VENT AND DRAIN PIPING ARE ALSO INCLUDED.

DOES NOT INCLUDE CONDENSATE AND FEED RETURN (SEE TH04), FOUNDATION (SEE A703), FUEL OIL PIPING (SEE C700) AND STEAM PIPING (SEE T10A, TH03).

KEY MAINTENANCE ITEMS
STEAM COILS
FAN ASSEMBLY
MOTOR
CONTROLLER

KEY MAINTENANCE ITEMS
PUMP, CONDENSATE RETURN
  MOTOR
  CONTROLLER
PIPING
PRESSURE GAGE

KEY MAINTENANCE ITEMS
STEAM GENERATOR ASSEMBLY
  STEAM GENERATOR
  PUMP, FEED WATER
  PUMP, RECIRCULATING
    MOTORS
    CONTROLLER
BLOWER
FLUE PIPING
PIPING, FEED WATER
PIPING, FUEL
RELIEF VALVES
RESERVE FEED TANK
PRESSURE SWITCH
STACK SWITCH
PUMP, FUEL
GAGES
ACCUMULATOR
BURNER ASSEMBLY
PIPING, STEAM
PIPING, BLOWDOWN
PIPING DRAIN
FEED AND FILTER TANK
FEED WATER REGULATING VALVE

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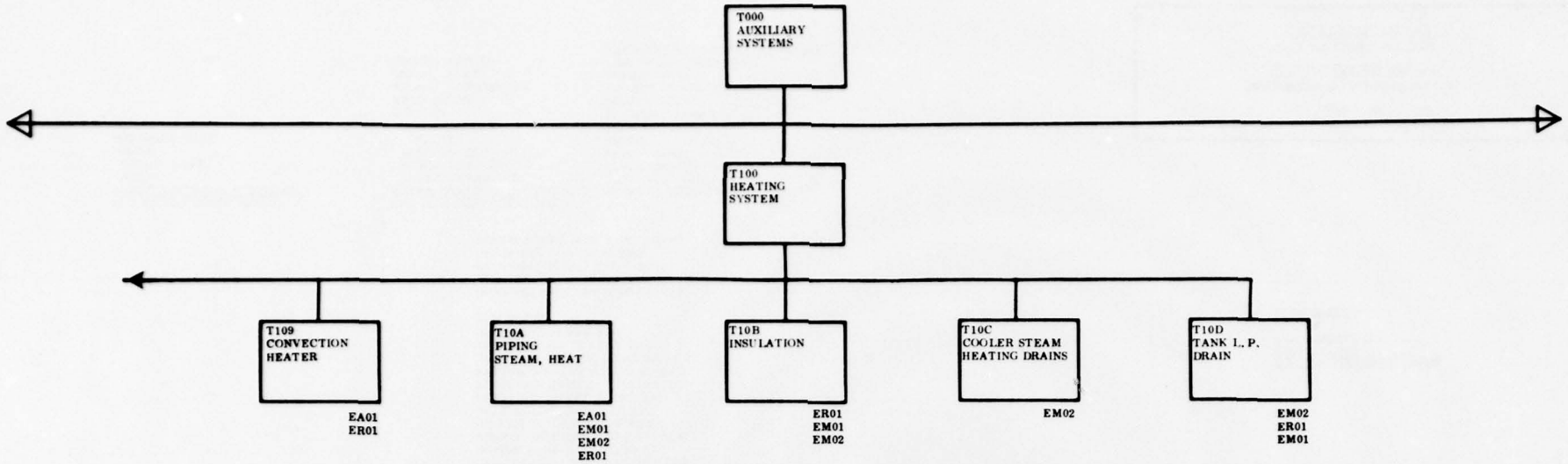
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

T000 AUXILIARY SYSTEMS
T100 HEATING SYSTEM



INCLUDES HEATERS, INLET VALVES, TRAPS AND PIPING FROM VALVES TO TRAPS.

DOES NOT INCLUDE STEAM SUPPLY (TH03) DRAINS (TH04).

KEY MAINTENANCE ITEMS
HEATER

INCLUDES PIPING, AIR VENT VALVES, CUT OUT VALVES, HANGERS, AND FITTINGS FROM THE SUPPLY SIDE OF THE CUT OUT VALVES (RADIATORS STBD, FWD; RADIATORS PORT FWD AND RADIATORS AFT) TO THE INLET VALVES OF THE RADIATORS.

DOES NOT INCLUDE STEAM PIPING TO CUT OUT VALVES (TH03).

KEY MAINTENANCE ITEMS
PIPING
VALVES
TRAPS

INCLUDES ALL SYSTEM INSULATION-PIPING, VALVES, STEAM GENERATOR, ETC.

KEY MAINTENANCE ITEMS
INSULATION
PIPING
HEATER
BOILER

INCLUDES THE CONDENSATE COOLER AND PIPING TO THE FIRST FLANGE OR FITTING.

DOES NOT INCLUDE S. W. COOLING PIPING (T806).

KEY MAINTENANCE ITEMS
COOLER
PIPING

INCLUDES CONDENSATE DRAIN TANK AND PIPING TO THE FIRST FLANGE OR FITTING OFF THE DRAIN COOLER, THE CONDENSATE RETURN PUMP AND THE RESERVE FEED TANK. ALSO INCLUDES TANK DRAIN PIPING TO BILGE, VENT PIPING AND FLOAT SWITCHES FOR CONTROLLING CONDENSATE PUMP.

KEY MAINTENANCE ITEMS
CONDENSATE DRAIN TANK
PIPING, CONDENSATE
VALVES
PIPING, VENT
PIPING, DRAIN
FLOAT SWITCHES

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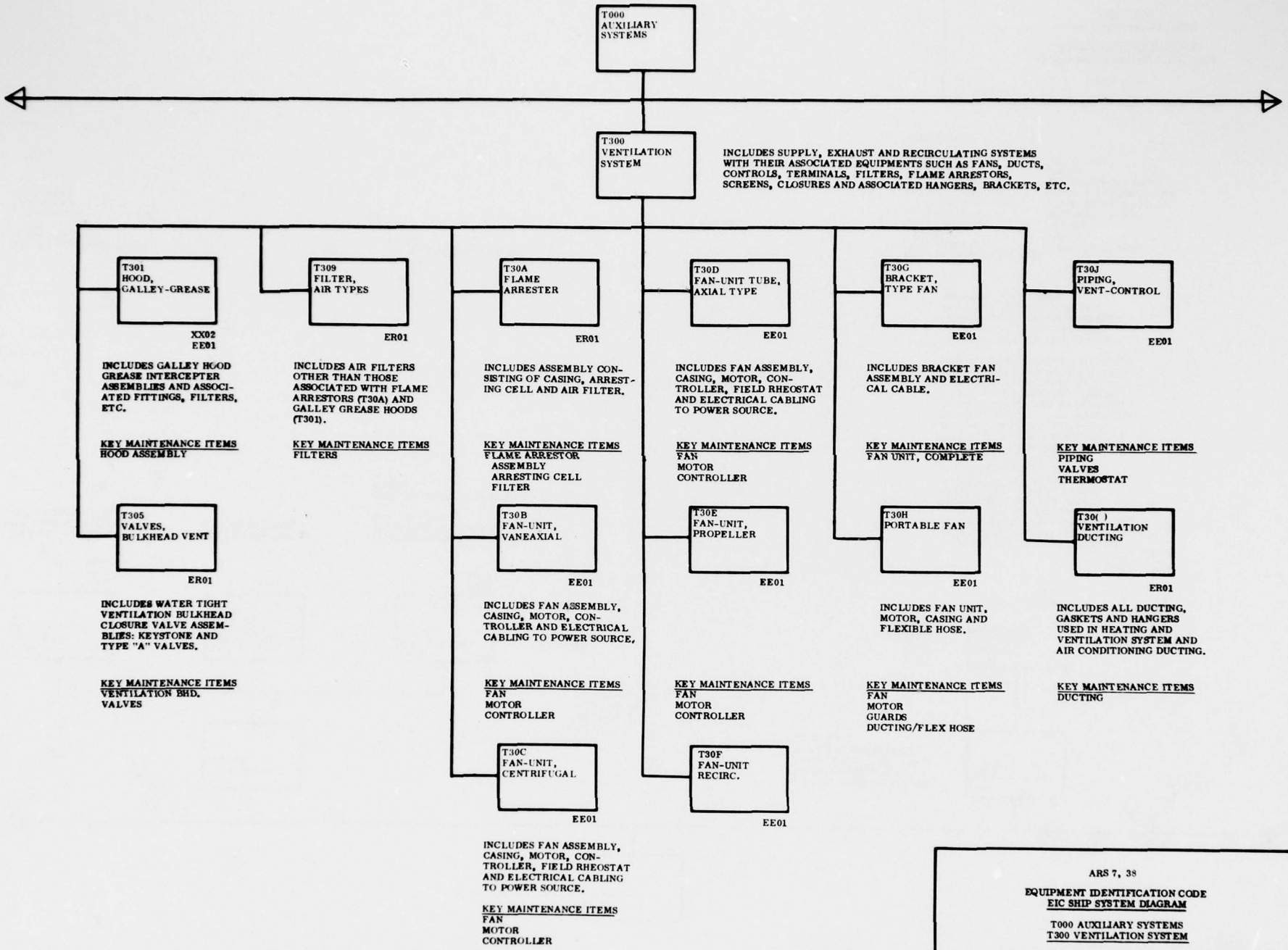
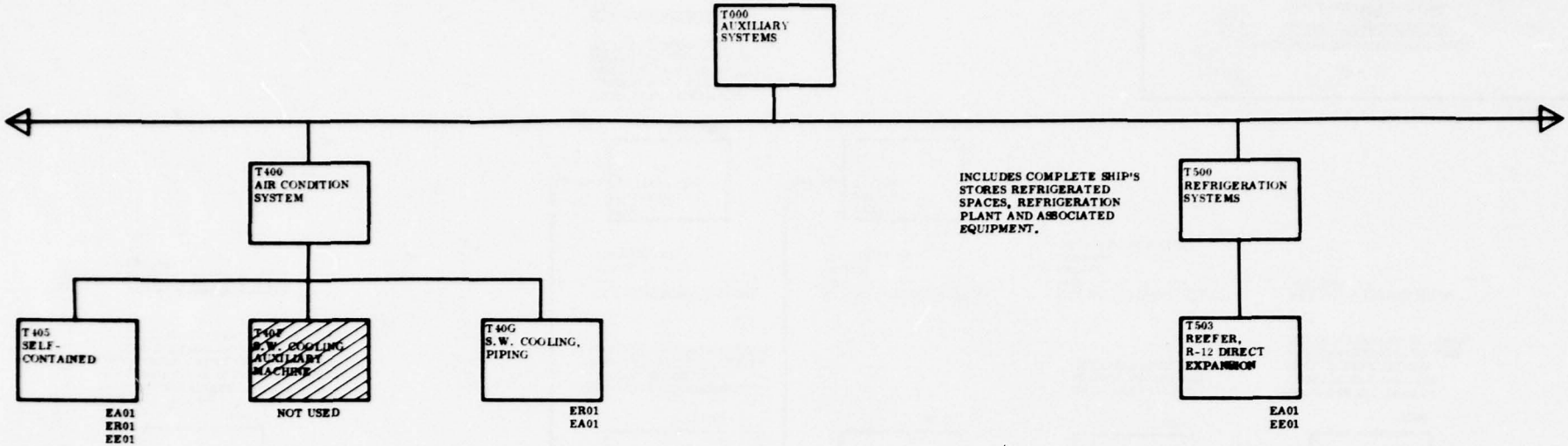
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

T000 AUXILIARY SYSTEMS
T100 HEATING SYSTEM


T000
AUXILIARY
SYSTEMS
T300
VENTILATION
SYSTEM
INCLUDES SUPPLY, EXHAUST AND RECIRCULATING SYSTEMS WITH THEIR ASSOCIATED EQUIPMENTS SUCH AS FANS, DUCTS, CONTROLS, TERMINALS, FILTERS, FLAME ARRESTORS, SCREENS, CLOSURES AND ASSOCIATED HANGERS, BRACKETS, ETC.
T301
HOOD,
GALLEY-GREASE
XX02
EE01
INCLUDES GALLEY HOOD GREASE INTERCEPTER ASSEMBLIES AND ASSOCIATED FITTINGS, FILTERS, ETC.
KEY MAINTENANCE ITEMS
HOOD ASSEMBLY
T305
VALVES,
BULKHEAD VENT
ER01
INCLUDES WATER TIGHT VENTILATION BULKHEAD CLOSURE VALVE ASSEMBLIES: KEYSTONE AND TYPE "A" VALVES.
KEY MAINTENANCE ITEMS
VENTILATION BHD.
VALVES
T309
FILTER,
AIR TYPES
ER01
INCLUDES AIR FILTERS OTHER THAN THOSE ASSOCIATED WITH FLAME ARRESTORS (T30A) AND GALLEY GREASE HOODS (T301).
KEY MAINTENANCE ITEMS
FILTERS
T30A
FLAME
ARRESTER
ER01
INCLUDES ASSEMBLY CONSISTING OF CASING, ARRESTING CELL AND AIR FILTER.
KEY MAINTENANCE ITEMS
FLAME ARRESTOR
ASSEMBLY
ARRESTING CELL
FILTER
T30B
FAN-UNIT,
VANEAXIAL
EE01
INCLUDES FAN ASSEMBLY, CASING, MOTOR, CONTROLLER AND ELECTRICAL CABLING TO POWER SOURCE.
KEY MAINTENANCE ITEMS
FAN
MOTOR
CONTROLLER
T30C
FAN-UNIT,
CENTRIFUGAL
EE01
INCLUDES FAN ASSEMBLY, CASING, MOTOR, CONTROLLER, FIELD RHEOSTAT AND ELECTRICAL CABLING TO POWER SOURCE.
KEY MAINTENANCE ITEMS
FAN
MOTOR
CONTROLLER
T30D
FAN-UNIT TUBE,
AXIAL TYPE
EE01
INCLUDES FAN ASSEMBLY, CASING, MOTOR, CONTROLLER, FIELD RHEOSTAT AND ELECTRICAL CABLING TO POWER SOURCE.
KEY MAINTENANCE ITEMS
FAN
MOTOR
CONTROLLER
T30E
FAN-UNIT,
PROPELLER
EE01
KEY MAINTENANCE ITEMS
FAN
MOTOR
CONTROLLER
T30F
FAN-UNIT
RECIRC.
EE01
T30G
BRACKET,
TYPE FAN
EE01
INCLUDES BRACKET FAN ASSEMBLY AND ELECTRICAL CABLE.
KEY MAINTENANCE ITEMS
FAN UNIT, COMPLETE
T30H
PORTABLE FAN
EE01
INCLUDES FAN UNIT, MOTOR, CASING AND FLEXIBLE HOSE.
KEY MAINTENANCE ITEMS
FAN
MOTOR
GUARDS
DUCTING/FLEX HOSE
T30J
PIPING,
VENT-CONTROL
EE01
KEY MAINTENANCE ITEMS
PIPING
VALVES
THERMOSTAT
T30( )
VENTILATION
DUCTING
ER01
INCLUDES ALL DUCTING, GASKETS AND HANGERS USED IN HEATING AND VENTILATION SYSTEM AND AIR CONDITIONING DUCTING.
KEY MAINTENANCE ITEMS
DUCTING
ARS 7, 38
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM
T000 AUXILIARY SYSTEMS
T300 VENTILATION SYSTEM



INCLUDES ALL OF THE SHIP'S VARIOUS SIZED SELF-CONTAINED AIR CONDITIONING UNITS.

SEE T806 SEA WATER SERVICE SYSTEMS.

INCLUDES PIPING AND VALVES SUPPLYING AIR CONDITIONER S.W. COOLING.

DOES NOT INCLUDE DUCTING (T3XX).

INCLUDES COMPLETE REFRIGERATION AND ICE MAKING SYSTEMS CONSISTING OF THE COMPRESSORS, COMPRESSOR MOTORS AND CONTROLLERS (COMPLETE WITH ELECTRICAL CABLING TO THE POWER SOURCE), CONDENSERS, *LIQUID RECEIVERS, ICE CUBE* MAKER, PIPING, VALVES, (THERMOSTATIC EXPANSION, SOLENOID, ANGLE, GLOBE, ETC.), PRESSURE SWITCHES AND REGULATORS, DEHYDRATORS, STRAINERS, GAGES, GAGEBOARDS, DEFROSTING LINES, THERMOMETERS, THERMOSTATS AND ROOM COILS. ALSO INCLUDED ARE THE REFRIGERATED SPACES (DOORS, INSULATION, ETC.).

DOES NOT INCLUDE FANS (T30E), FOUNDATIONS (A703), AIR CONDITIONERS (T400), REACH-IN REFRIGERATORS (1B01) AND DRINKING WATER COOLERS (1C03).

KEY MAINTENANCE ITEMS
COMPRESSOR UNIT
MOTOR
CONTROLLER
FAN ASSEMBLY
CONDENSER

KEY MAINTENANCE ITEMS
PIPING
VALVES

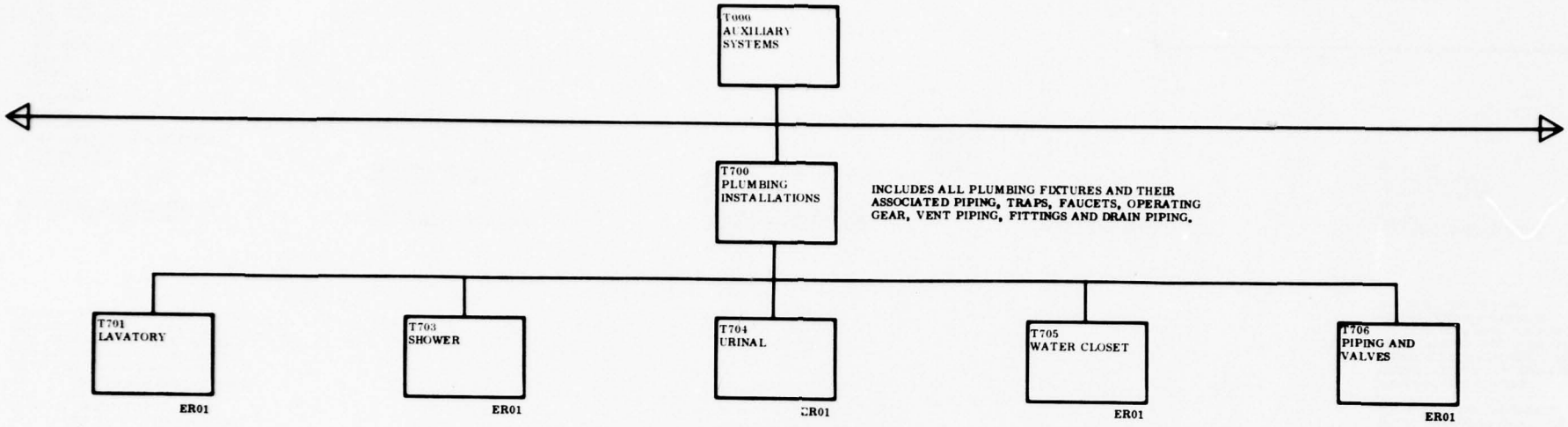
KEY MAINTENANCE ITEMS

COMPRESSORS	LIQUID RECEIVERS
MOTORS	PIPING
CONTROLLERS	VALVES
THERMOSTATIC EXPANSION VALVES	SOLENOID VALVES
PRESSURE SWITCHES	PRESSURE REGULATORS
DEHYDRATORS	GAGES & THERMOMETERS
STRAINERS	REFRIGERATED SPACES
GAGE BOARDS	DOORS
COILS	INSULATION
CONDENSERS	

ARS 7, 38

EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

T000 AUXILIARY SYSTEMS
T400 - T500



INCLUDES LAVATORIES AND ASSOCIATED PIPING (FROM SUPPLY SIDE OF CUT-OUT VALVE), VALVES, FITTINGS, DRAIN PIPING AND MOUNTING FIXTURES. ALSO INCLUDES SINKS IN GALLEY, MEDICAL SPACE, ETC.

KEY MAINTENANCE ITEMS
LAVATORIES
PIPING
VALVES
TRAPS

INCLUDES PIPING (FROM SUPPLY SIDE OF CUT-OUT VALVE), VALVES, SHOWER HEADS, FAUCETS AND MIXING VALVES.

DOES NOT INCLUDE SHOWER PARTITIONS (1501) AND DECK DRAINS (TC00).

KEY MAINTENANCE ITEMS
MIXING VALVES
SHOWER HEADS
PIPING
VALVES

INCLUDES URINALS, FLUSHOMETERS, MOUNTING FIXTURES AND DRAIN PIPING.

DOES NOT INCLUDE PRIVACY SHIELDS (1501).

KEY MAINTENANCE ITEMS
FLUSHING VALVE
URINAL
PIPING

INCLUDES WATER CLOSETS AND ASSOCIATED FLUSHING VALVES, PIPING AND FIXTURES.

KEY MAINTENANCE ITEMS
FLUSHING VALVE
PIPING
WATER CLOSETS

INCLUDES DRAIN AND VENT PIPING BETWEEN FIXTURE AND SCUPPER.

DOES NOT INCLUDE SCUPPER OR SCUPPER VALVE (TC04).

SEE TB01 FOR FRESH WATER SUPPLY PIPING TO CUT-OUT VALVES, T803 FOR FLUSHING WATER PIPING TO UNITS, TC06 FOR DECK DRAINS AND OVERBOARD DRAIN LINES.

KEY MAINTENANCE ITEMS
PIPING
VALVES

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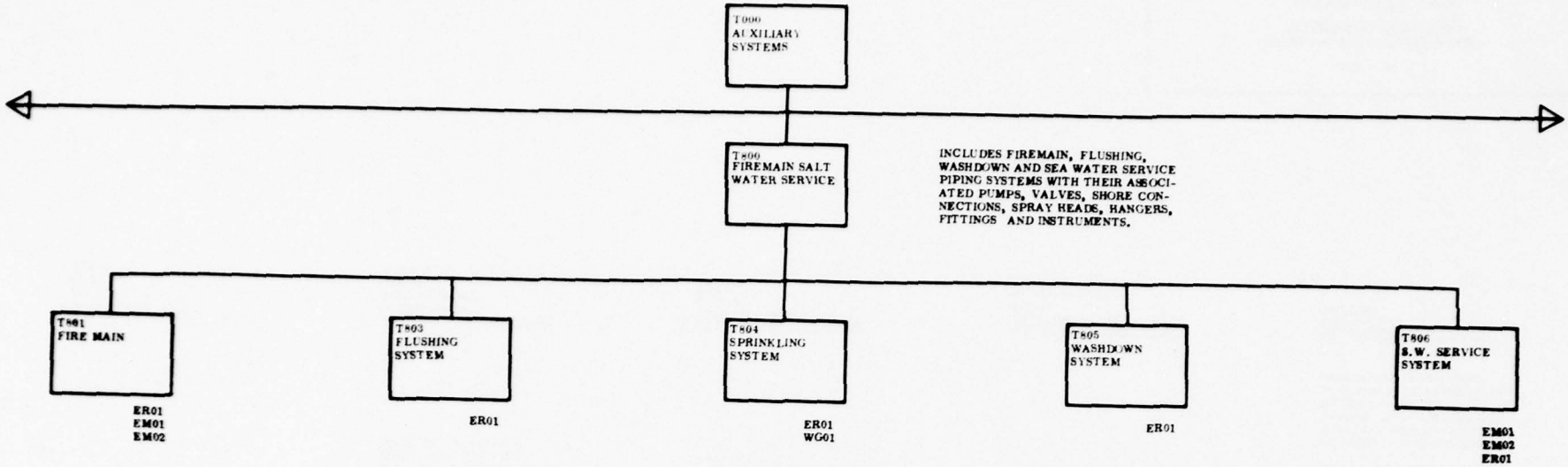
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

T000 AUXILIARY SYSTEMS
T700 PLUMBING INSTALLATIONS



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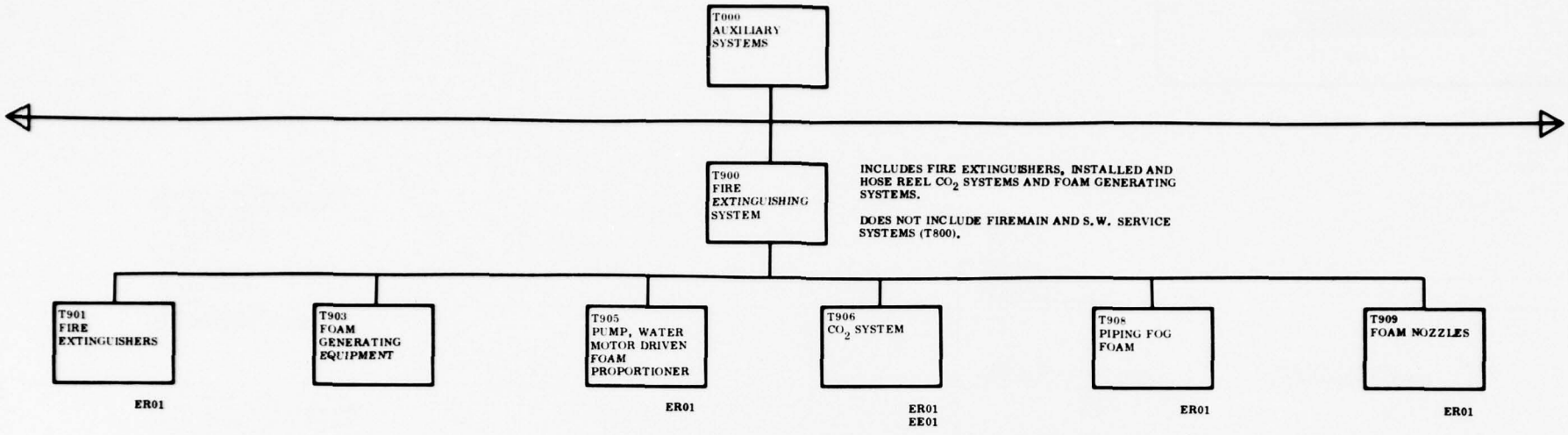
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

T000 AUXILIARY SYSTEMS
T800 FIREMAIN SALT WATER SERVICE



INCLUDES ALL PORTABLE FIRE EXTINGUISHERS; CO_2 AND DRY CHEMICAL.

INCLUDES PRESSURE TYPE FOAM GENERATORS AND THEIR ASSOCIATED VALVE AND TANK ASSEMBLIES.

INCLUDES FOAM, PROPORTIONERS, CONNECTING HOSES AND PICKUP TUBES.

INCLUDES CO_2 CYLINDERS, CYLINDER DISCHARGE HEADS, PIPING, RELEASE VALVES, PULL CABLES, PULL BOXES, PRESSURE SWITCHES, ALARMS, DISCHARGE NOZZLES, HOSES, REELS, ETC. THAT MAKE UP INSTALLED CO_2 FIRE EXTINGUISHING SYSTEM FOR THE PAINT AND INFLAMMABLE LIQUID STOREROOM AND THE HOSE REEL SYSTEMS IN THE MOTOR AND GENERATOR ROOMS.

INCLUDES THE PIPING FROM THE FOAM GENERATORS IN THE MOTOR AND GENERATOR ROOMS TO THE DISCHARGE STATIONS. ALSO INCLUDES HOSES, HOSE RACKS, VALVES, ETC.

DOES NOT INCLUDE NOZZLES OR PICK-UP TUBES (T909).

INCLUDES ALL FOAM NOZZLES AND PICK-UP TUBE.

KEY MAINTENANCE ITEMS
PORTABLE FIRE EXTINGUISHER, CO_2
PORTABLE FIRE EXTINGUISHER, DRY CHEMICAL

KEY MAINTENANCE ITEMS
FOAM PROPORTIONER

KEY MAINTENANCE ITEMS
PUMP, WATER MOTOR DRIVEN FOAM LIQUID PROPORTIONER
HOSE
PICK-UP TUBES

KEY MAINTENANCE ITEMS
PIPING
CO_2 CYLINDERS
CYLINDER DISCHARGE HEADS
PULL CABLES
PRESSURE SWITCHES
ALARMS
DISCHARGE NOZZLES
HOSES
HOSE REELS

KEY MAINTENANCE ITEMS
PIPING

KEY MAINTENANCE ITEMS
FOAM NOZZLES
PICK-UP TUBE

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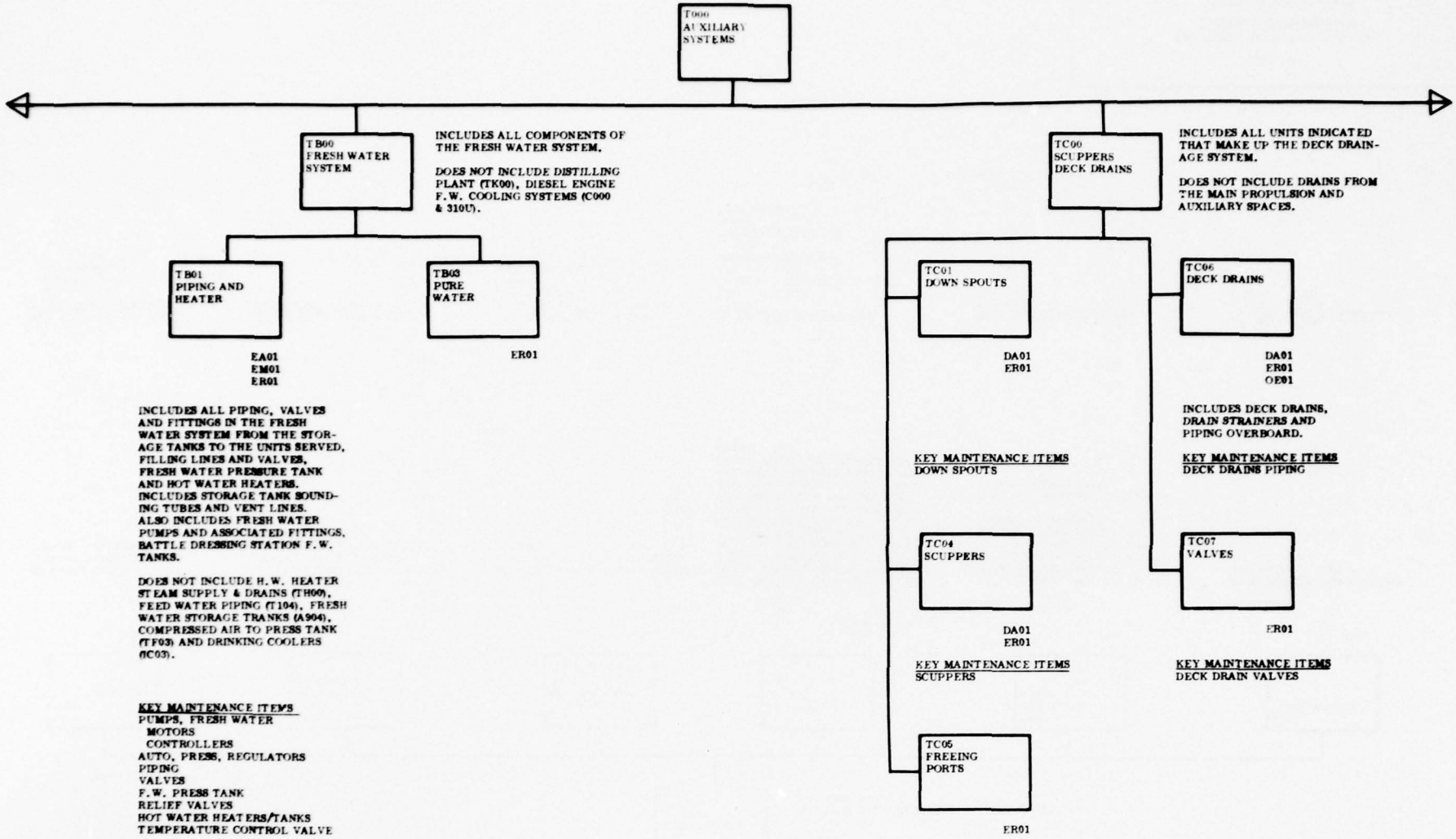
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

T000 AUXILIARY SYSTEMS
T900 FIRE EXTINGUISHING SYSTEM



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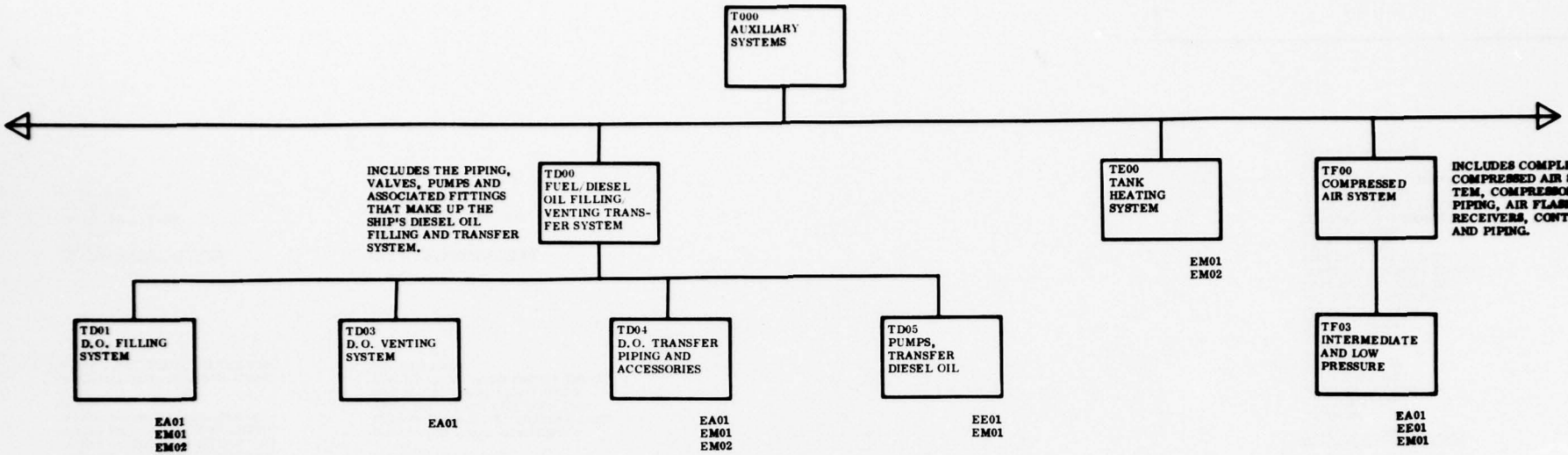
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

T000 AUXILIARY SYSTEMS
TB00 - TC00



INCLUDES FUELING TRUNKS P/S (4) AND FILL PIPING TO TANKS A-409-F, A-410-F, C-1-F AND C-2-F.

NOTE: FILLING OF OTHER TANKS IS THROUGH TRANSFER PIPING (TD04).

KEY MAINTENANCE ITEMS
PIPING
VALVES
FUELING TRUNKS

INCLUDES ALL D.O. TANK VENT PIPING AND TANK OVERFLOW PIPING, CHECK VALVES AND SCREENS.

KEY MAINTENANCE ITEMS
PIPING
CHECK VALVES

INCLUDES ALL PIPING, SLUICE VALVES, VALVES, AND VALVE MANIFOLDS INTERCONNECTING ALL DIESEL OIL STORAGE TANKS AND LEADING TO DECK DISCHARGE STATIONS THAT COMPRISE THE DIESEL OIL TRANSFER SYSTEM. ALSO INCLUDES STORAGE TANK SOUNDING TUBES AND VALVE REMOTE OPERATING MECHANISMS.

DOES NOT INCLUDE D.O. SERVICE TANKS (A904), SLUDGE TANK (C805), D.O. SERVICE SYSTEM (C700), D.O. PURIFIER (C704), D.O. TRANSFER PUMP (TD05), FLUSHING AND BALLASTING CONNECTIONS (TA03).

NOTE: THE 4" DECK DISCHARGE STATIONS CAN ALSO BE USED FOR FILLING BUT ARE NOT PART OF FILLING SYSTEM.

KEY MAINTENANCE ITEMS
PIPING
VALVES
FUEL VALVE MANIFOLDS
SOUNDING TUBES
STRAINERS
REMOTE VALVE OPERATIONS

INCLUDES THE DIESEL OIL TRANSFER PUMP, MOTOR, CONTROLLER AND FITTINGS, PIPING TO FIRST FLANGE OR FITTING AND ELECTRICAL CABLING TO THE POWER SOURCE.

KEY MAINTENANCE ITEMS
PUMP; DIESEL OIL TRANS.
MOTOR
CONTROLLER
PRESSURE GAGES
RELIEF VALVE

INCLUDES ALL THE PIPING, VALVES, COMPRESSORS, STORAGE FLASKS AND RECEIVERS OR TANKS THAT MAKE UP THE SHIPS SERVICE COMPRESSED AIR SYSTEM AND THE ENGINE STARTING AIR SYSTEM.

DOES NOT INCLUDE SALVAGE AIR COMPRESSORS (1806), DIVER'S AIR COMPRESSOR (1807), F.W. COMPRESSION TANK (TB01), SEA CHESTS (AB00).

KEY MAINTENANCE ITEMS
COMPRESSOR L.P.
MOTOR
CONTROLLER
COMPRESSOR M.P.
MOTOR
CONTROLLER
PIPING
VALVES
SHIP SERVICE AIR TANK
AIR FLASKS (DIESEL ENGINE STARTING)
REDUCING VALVES (600/250, 600/100, 100/50)
MOISTURE SEPARATORS
RELIEF VALVES
PRESSURE GAGES
AIR WHISTLE & SIREN TANK
LUBRICATOR
DIESEL ENG. STARTING AIR VALVES

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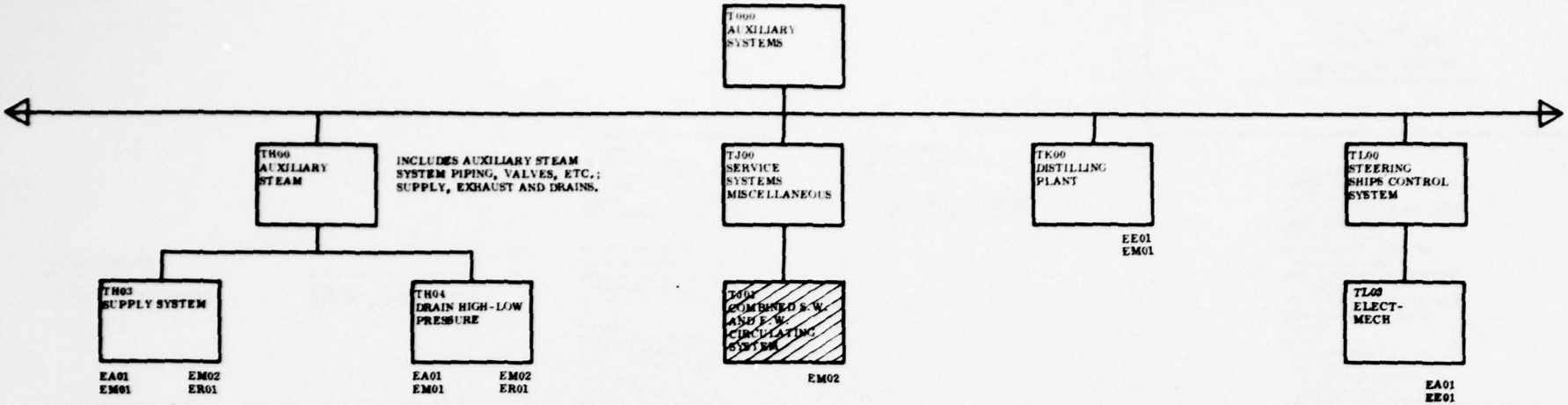
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

T000 AUXILIARY SYSTEMS
TD00 - TF00



INCLUDES THE AUXILIARY STEAM PIPING AND VALVES (INCLUDING STEAM REDUCING GROUPS) FROM THE STEAM SUPPLY VALVES ON THE STEAM GENERATOR TO THE INLET VALVES OF THE FOLLOWING:

- DISTILLING PLANT
- DISTILLING PLANT AIR EJECTORS
- GALLEY STEAM KETTLES
- L.O. SETTLING TANK HEATER
- L.O. HEATER
- F.O. TANK HEATING COILS
- WASHING MACHINE
- WATER HEATERS
- STEAM HEATING PIPING

ALSO INCLUDES SHORE STEAM CONNECTION VALVES, PIPING, BLEEDER VALVES, BUCKET FILL LINE AND VALVE IN CREWS WASHROOM AND PIPING AND HOSE CONNECTIONS IN MOTOR ROOM AND GENERATOR ROOM.

DOES NOT INCLUDE STEAM GENERATOR (T104), PIPING, STEAM HEAT (T10A).

KEY MAINTENANCE ITEMS
PIPING
VALVES
REDUCING VALVES
RELIEF VALVES
STRAINERS

INCLUDES THE PIPING, VALVES AND FITTINGS OF THE STEAM CONDENSATE RETURN LINES FROM THE SWING CHECK VALVES/TRAPS OFF THE RADIATORS, LUBE OIL HEATER, F.O. TANK HEATING COILS, THE TRAPS ON THE L.O. SETTLING TANK, WATER HEATERS, STEAM KETTLES, STEAM GENERATOR ACCUMULATOR, DISTILLING PLANT AIR EJECTORS & DRAIN REGULATOR AND THE FEED AND FILTER TANK AND THE FIRST FLANGE OR FITTING OFF THE CONDENSATE COOLER. ALSO INCLUDES THE PIPING TO AND FROM THE DRAIN INSPECTION TANK, THE DRAIN INSPECTION TANK AND SYSTEM DRAIN LINES TO THE BILGE.

DOES NOT INCLUDE CONDENSATE RETURN PUMP (T103), RESERVE FEED TANK AND FILTER AND FEED TANK AND ASSOC. PIPING (T104), DRAIN COOLER (T10C), CONDENSATE DRAIN TANK (T10D).

KEY MAINTENANCE ITEMS
PIPING
VALVES
DRAIN INSPECTION TANK

INCLUDES THE COMPLETE STEERING SYSTEM WHICH IS MADE UP OF THE LOCAL, QUARTERDECK AND PILOT HOUSE STEERING STATIONS, THE PUMPS, MOTORS, RAM, RAM CYLINDERS, SELF-CONTAINED OIL STORAGE TANKS AND CONTROLS. ALSO INCLUDES RUDDER ASSEMBLY.

DOES NOT INCLUDE FOUNDATIONS (A703), RUDDER ANGLE INDICATORS (M618).

KEY MAINTENANCE ITEMS
HYDRAULIC PUMPS
MOTORS
CONTROLLERS
SHUTTLE VALVES
VALVE, SIX-WAY
RELIEF VALVES
PIPING
RAM
RAM CYLINDERS
EXPANSION TANKS
TELEMOTOR TRANSMITTER
TELEMOTOR RECEIVER
STEERING CONTROL STAND
FOLLOW-UP CONTROLS
RAPSON SLIDE
DUMMY TILLER
TRICKWHEEL ASSEMBLY
AFTER STEERING ASSEMBLY
PRESSURE GAGES
HYDRAULIC HAND PUMP
RUDDER
RUDDER BEARINGS

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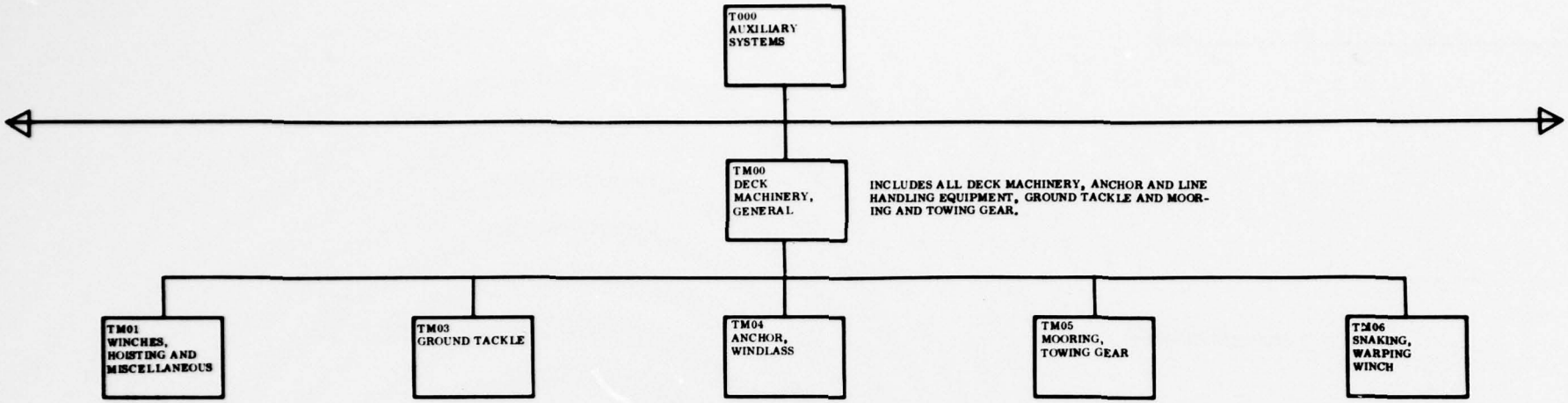
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

T000 AUXILIARY SYSTEMS
TH00 - TL00



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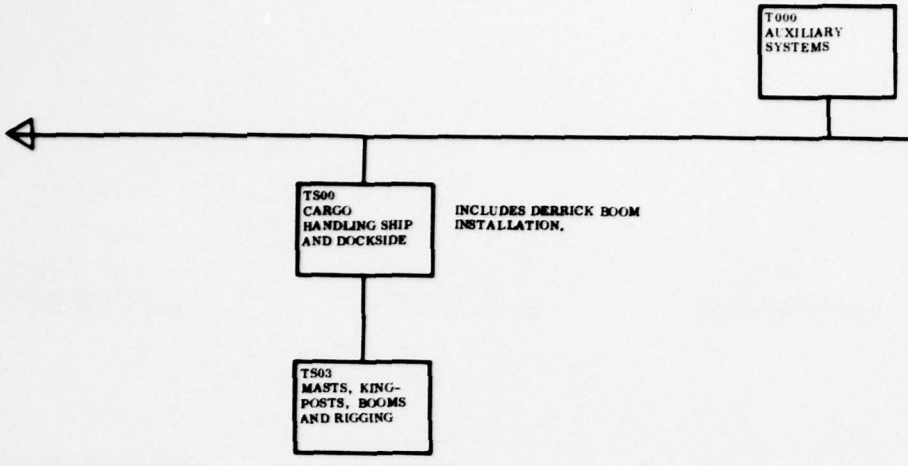
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

T000 AUXILIARY SYSTEMS
TM00 DECK MACHINERY GENERAL



INCLUDES DERRICK BOOM INSTALLATION.

INCLUDES DERRICK BOOM INSTALLATION AND RIGGING

KEY MAINTENANCE ITEMS
TRIPOD BOOM ASSEMBLY
BLOCKS
RIGGING

INCLUDES FUELING AT SEA AND REPLENISHMENT AT SEA FITTINGS AND EQUIPMENT

INCLUDES REPLENISHMENT AT SEA FITTINGS AND EQUIPMENT; FUELING AT SEA FITTINGS AND EQUIPMENT.

DOES NOT INCLUDE FUELING TRUNKS (TD01).

KEY MAINTENANCE ITEMS
F.A.S. FITTINGS

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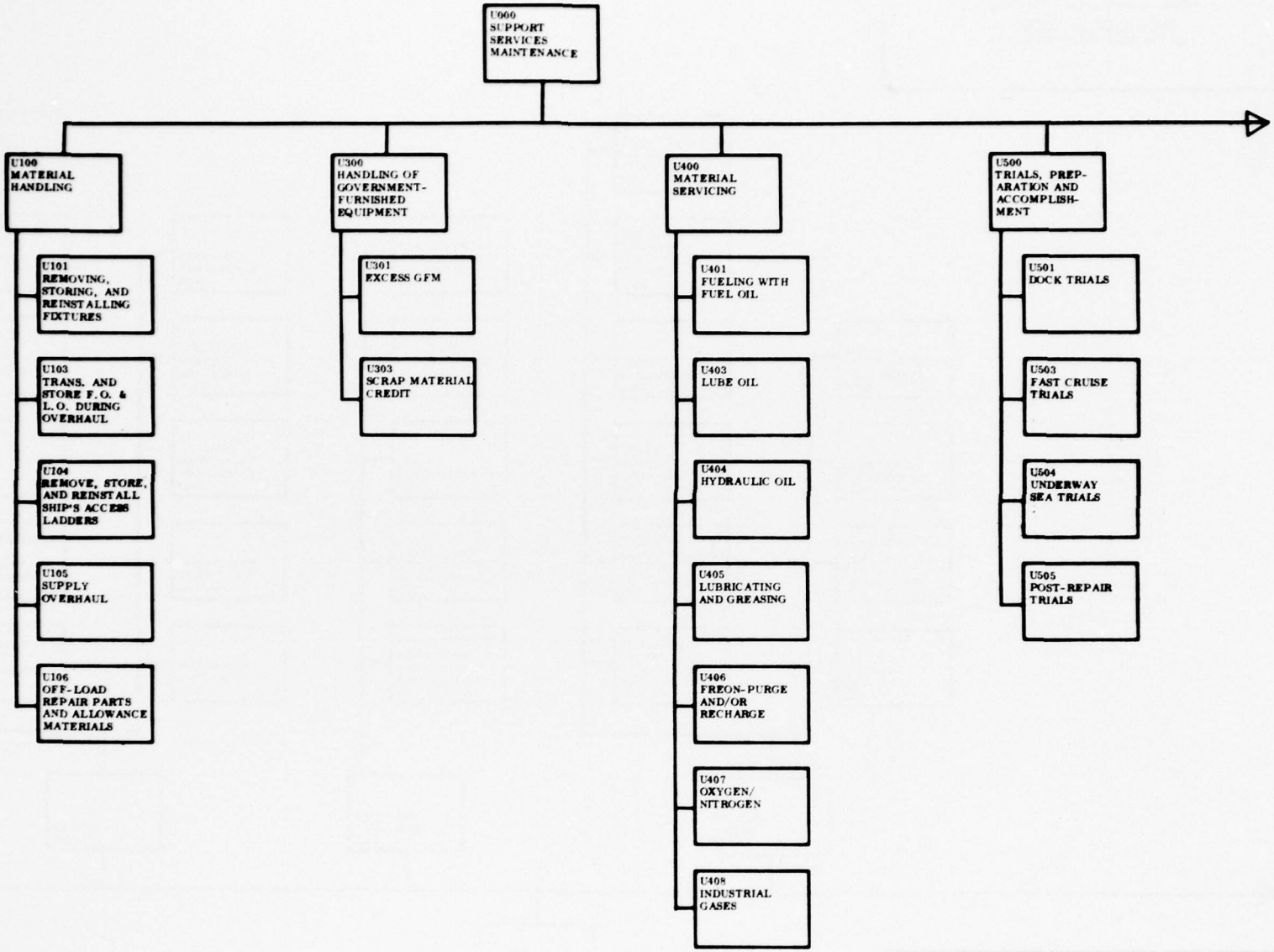
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

T000 AUXILIARY SYSTEMS
TS00 - TT00



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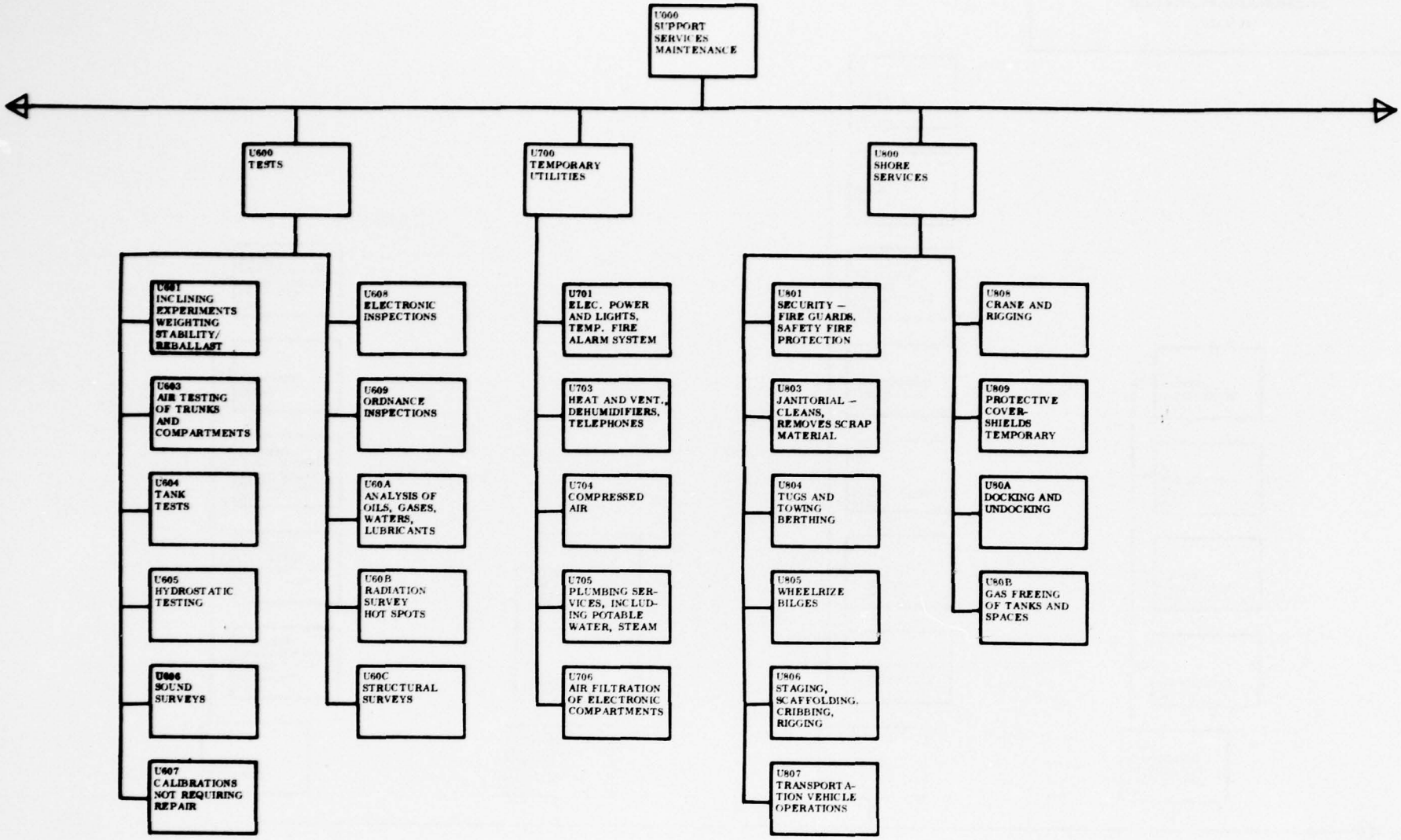
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

U000 SUPPORT SERVICES MAINTENANCE
U100 - U500



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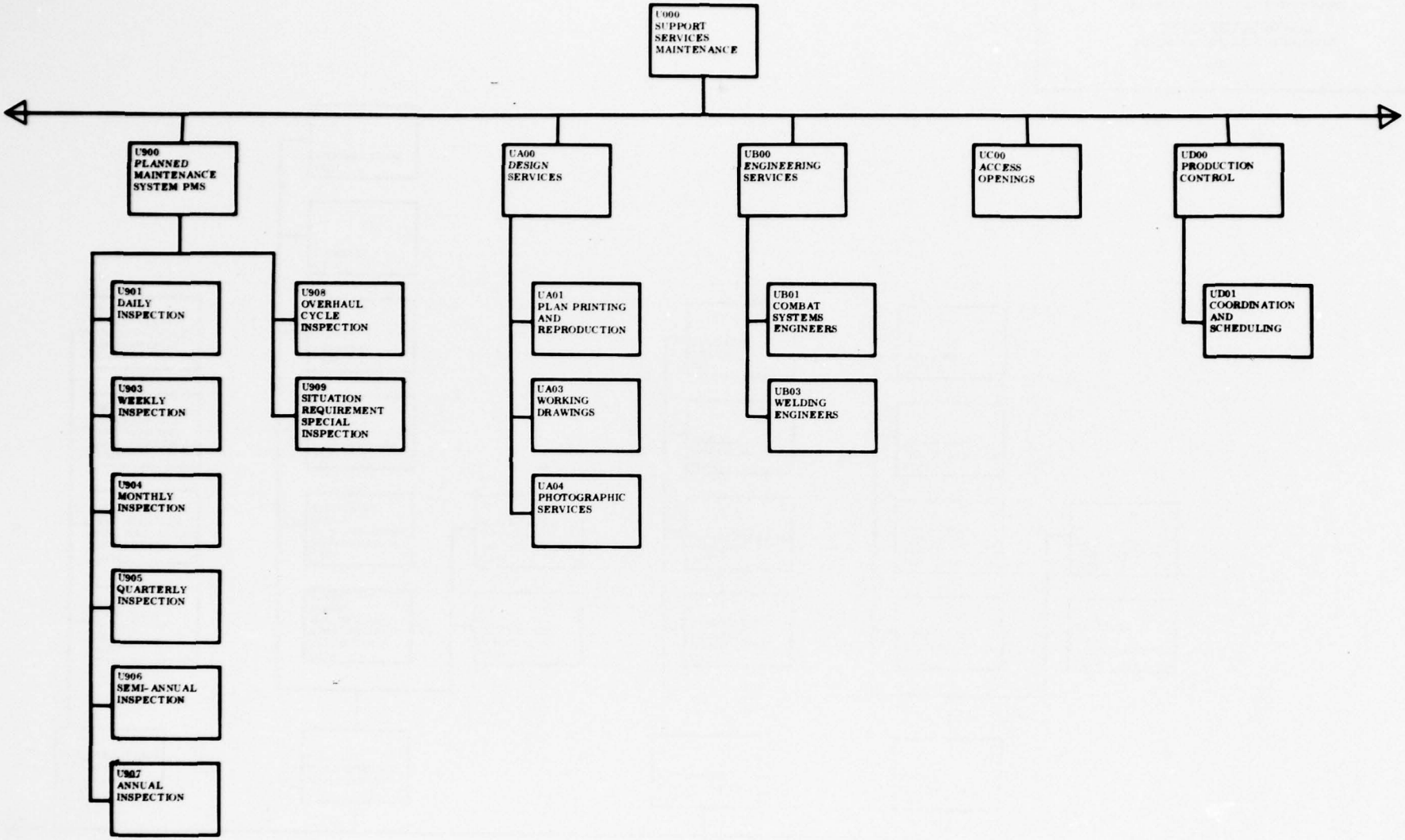
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

U000 SUPPORT SERVICES MAINTENANCE
U600 - U800



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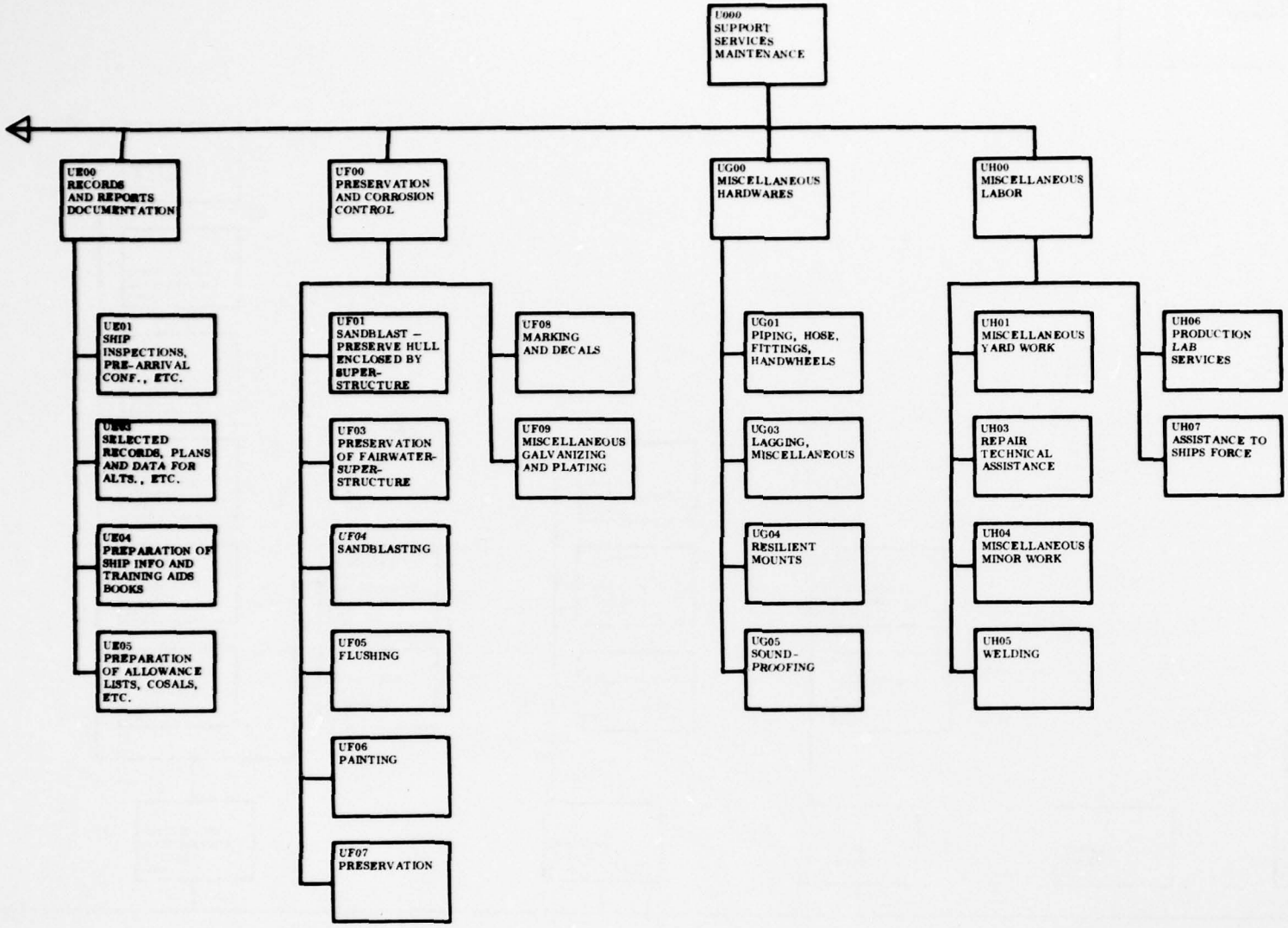
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

U000 SUPPORT SERVICES MAINTENANCE
U900 - UD00



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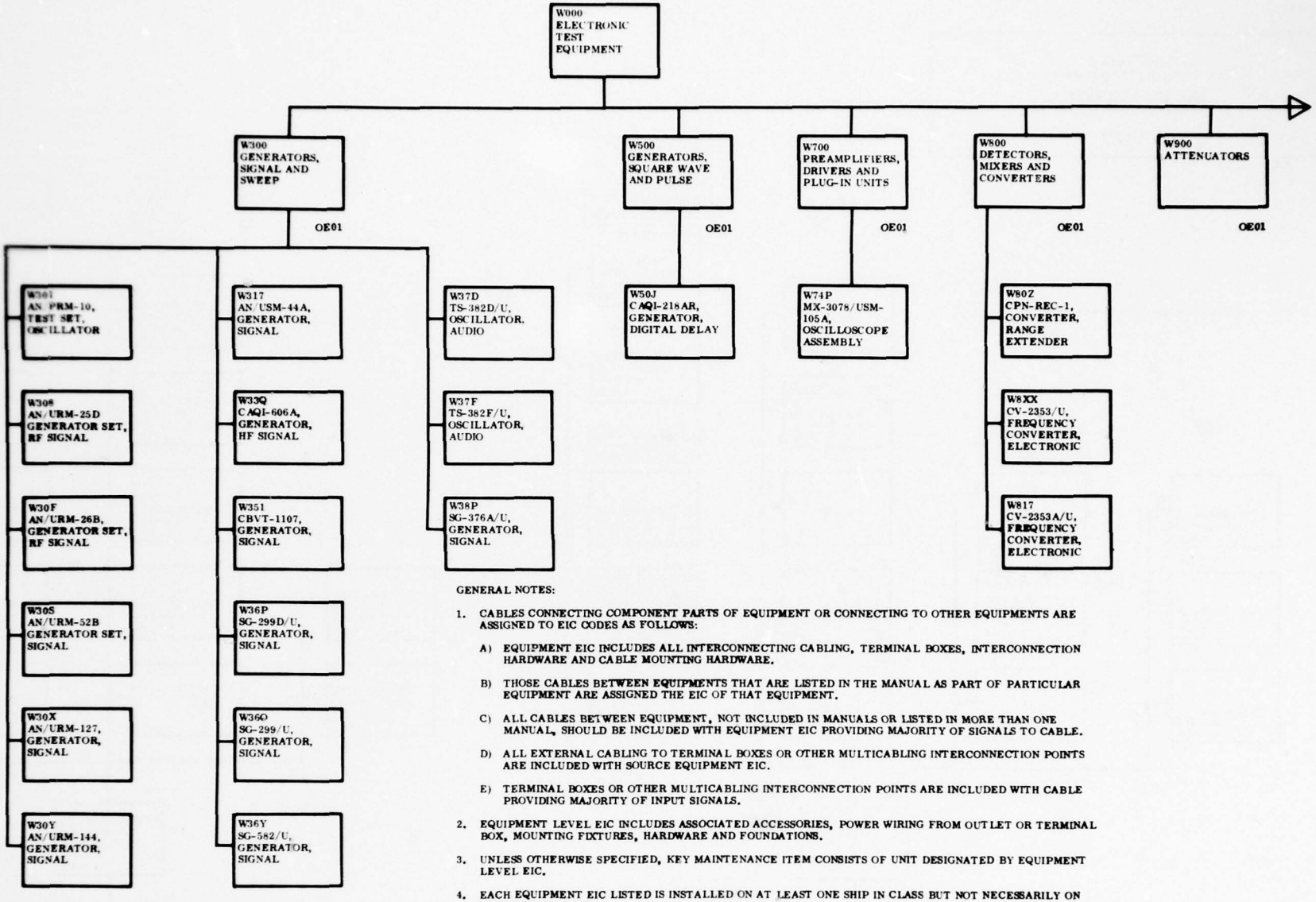
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

U000 SUPPORT SERVICES MAINTENANCE
UE00 - UH00



GENERAL NOTES:

1. CABLES CONNECTING COMPONENT PARTS OF EQUIPMENT OR CONNECTING TO OTHER EQUIPMENTS ARE ASSIGNED TO EIC CODES AS FOLLOWS:

   A) EQUIPMENT EIC INCLUDES ALL INTERCONNECTING CABLING, TERMINAL BOXES, INTERCONNECTION HARDWARE AND CABLE MOUNTING HARDWARE.

   B) THOSE CABLES BETWEEN EQUIPMENTS THAT ARE LISTED IN THE MANUAL AS PART OF PARTICULAR EQUIPMENT ARE ASSIGNED THE EIC OF THAT EQUIPMENT.

   C) ALL CABLES BETWEEN EQUIPMENT, NOT INCLUDED IN MANUALS OR LISTED IN MORE THAN ONE MANUAL, SHOULD BE INCLUDED WITH EQUIPMENT EIC PROVIDING MAJORITY OF SIGNALS TO CABLE.

   D) ALL EXTERNAL CABLING TO TERMINAL BOXES OR OTHER MULTICABLING INTERCONNECTION POINTS ARE INCLUDED WITH SOURCE EQUIPMENT EIC.

   E) TERMINAL BOXES OR OTHER MULTICABLING INTERCONNECTION POINTS ARE INCLUDED WITH CABLE PROVIDING MAJORITY OF INPUT SIGNALS.

2. EQUIPMENT LEVEL EIC INCLUDES ASSOCIATED ACCESSORIES, POWER WIRING FROM OUTLET OR TERMINAL BOX, MOUNTING FIXTURES, HARDWARE AND FOUNDATIONS.

3. UNLESS OTHERWISE SPECIFIED, KEY MAINTENANCE ITEM CONSISTS OF UNIT DESIGNATED BY EQUIPMENT LEVEL EIC.

4. EACH EQUIPMENT EIC LISTED IS INSTALLED ON AT LEAST ONE SHIP IN CLASS BUT NOT NECESSARILY ON ALL SHIPS IN CLASS.

5. EQUIPMENT, FOR WHICH EIC IS NOT ASSIGNED, IS GIVEN AN EIC, W(_)XX WHERE THE PARENTHESES ARE REPLACED BY THE NUMBER OR LETTER INDICATING THE SUBSYSTEM TO WHICH EQUIPMENT BELONGS.

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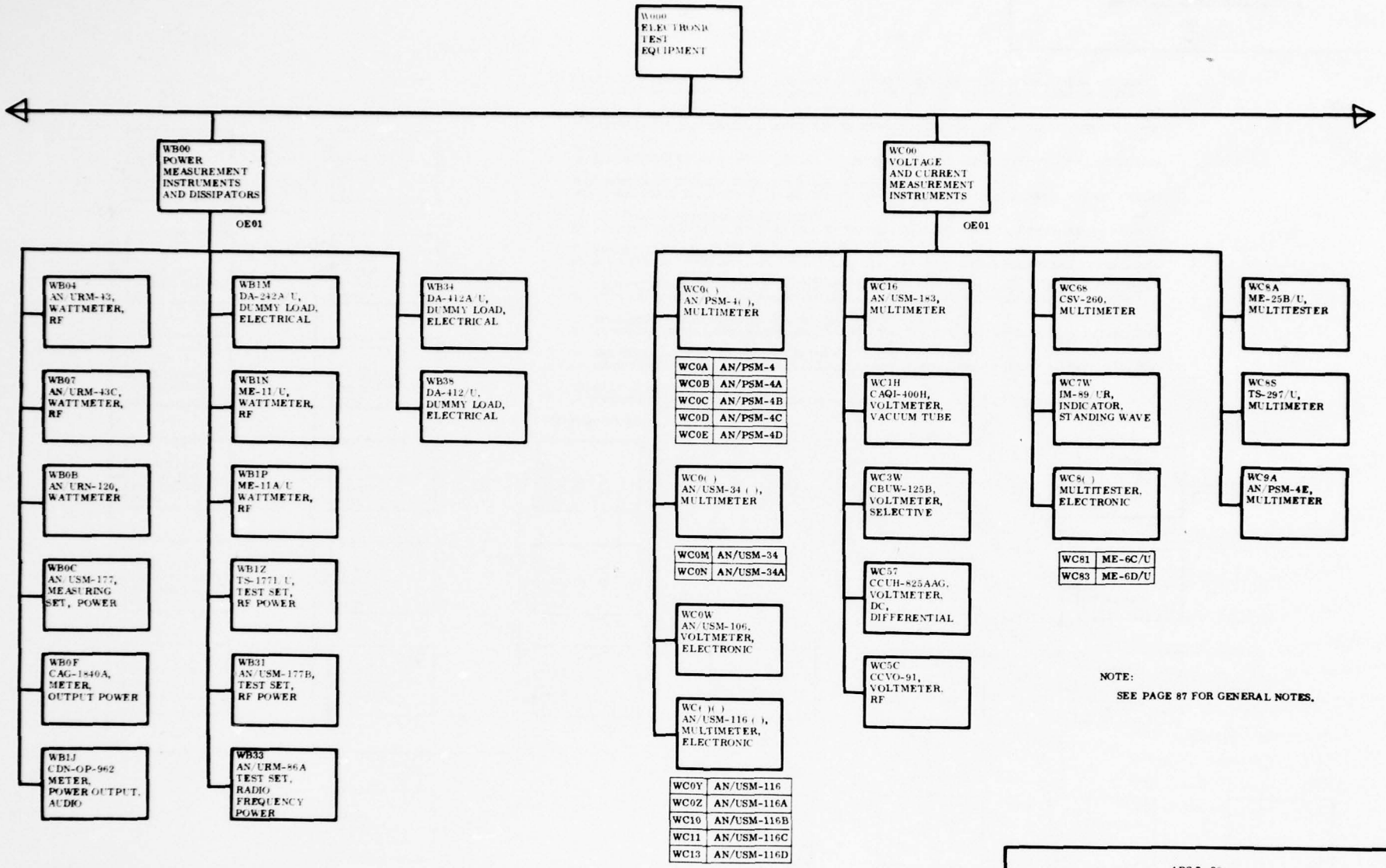
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

W000 ELECTRONIC TEST EQUIPMENT
W300 - W900



NOTE:

SEE PAGE 87 FOR GENERAL NOTES.

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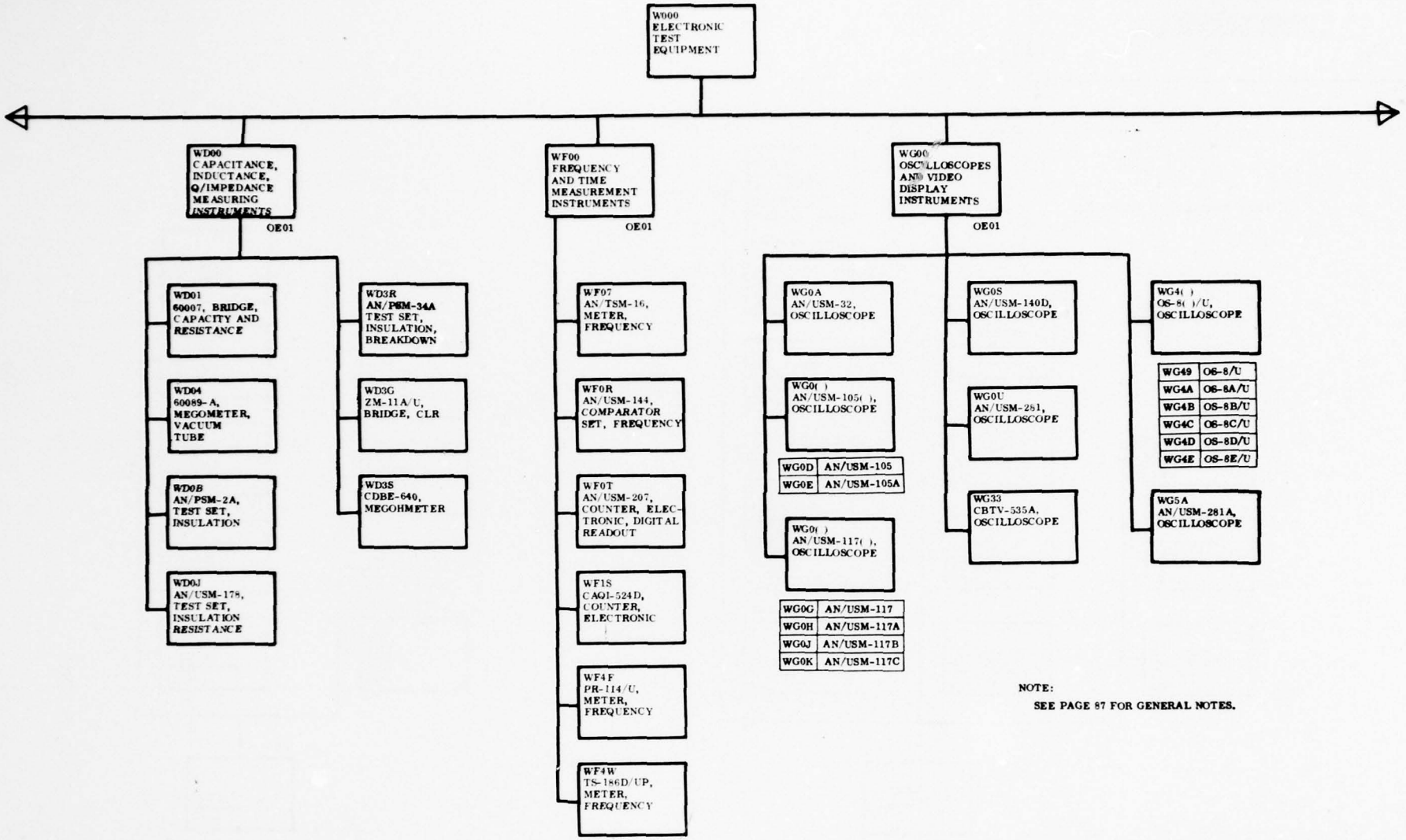
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

W000 ELECTRONIC TEST EQUIPMENT
WB00 - WC00



NOTE:

SEE PAGE 87 FOR GENERAL NOTES.

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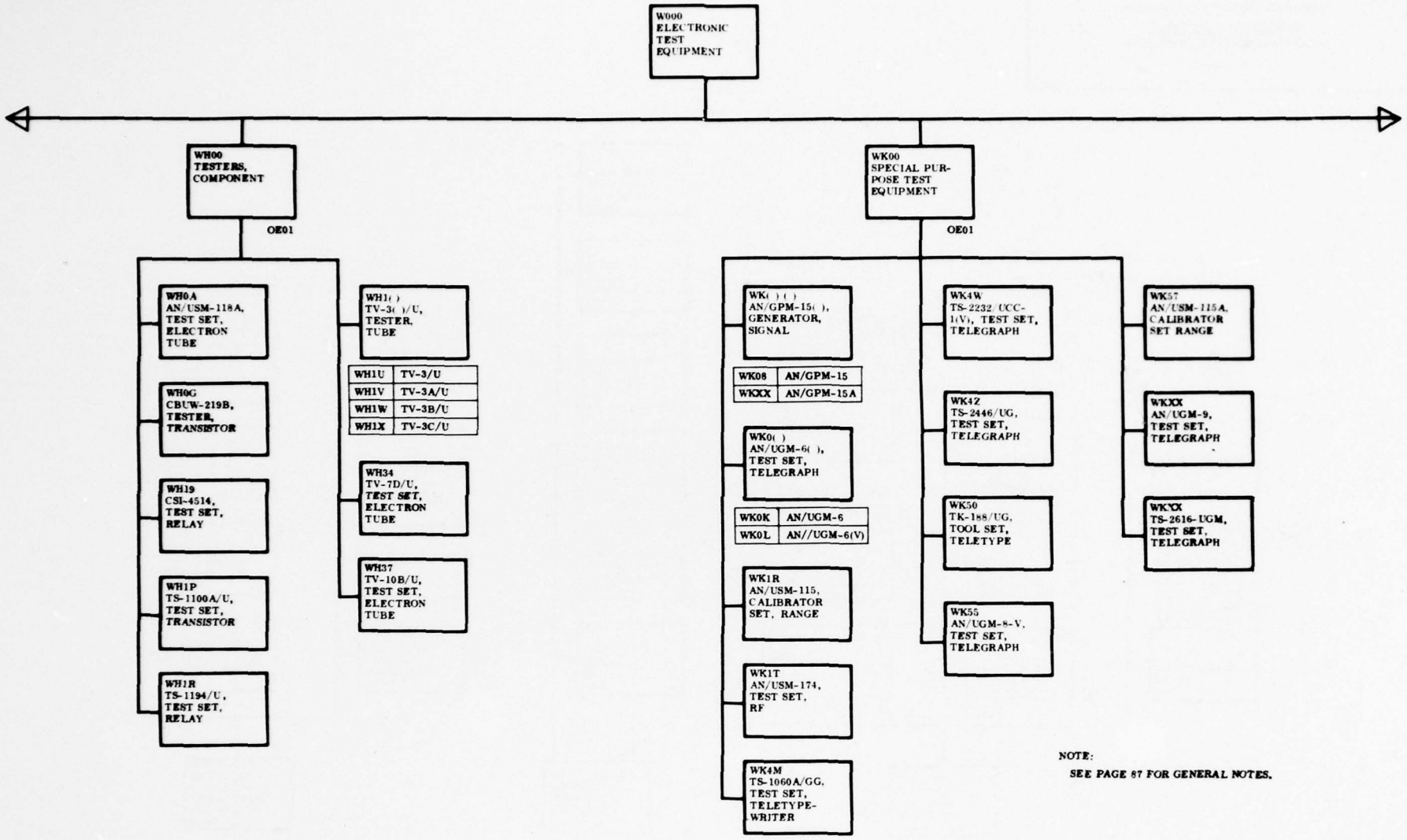
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

W000 ELECTRONIC TEST EQUIPMENT
WD00 - WG00



NOTE:

SEE PAGE 87 FOR GENERAL NOTES.

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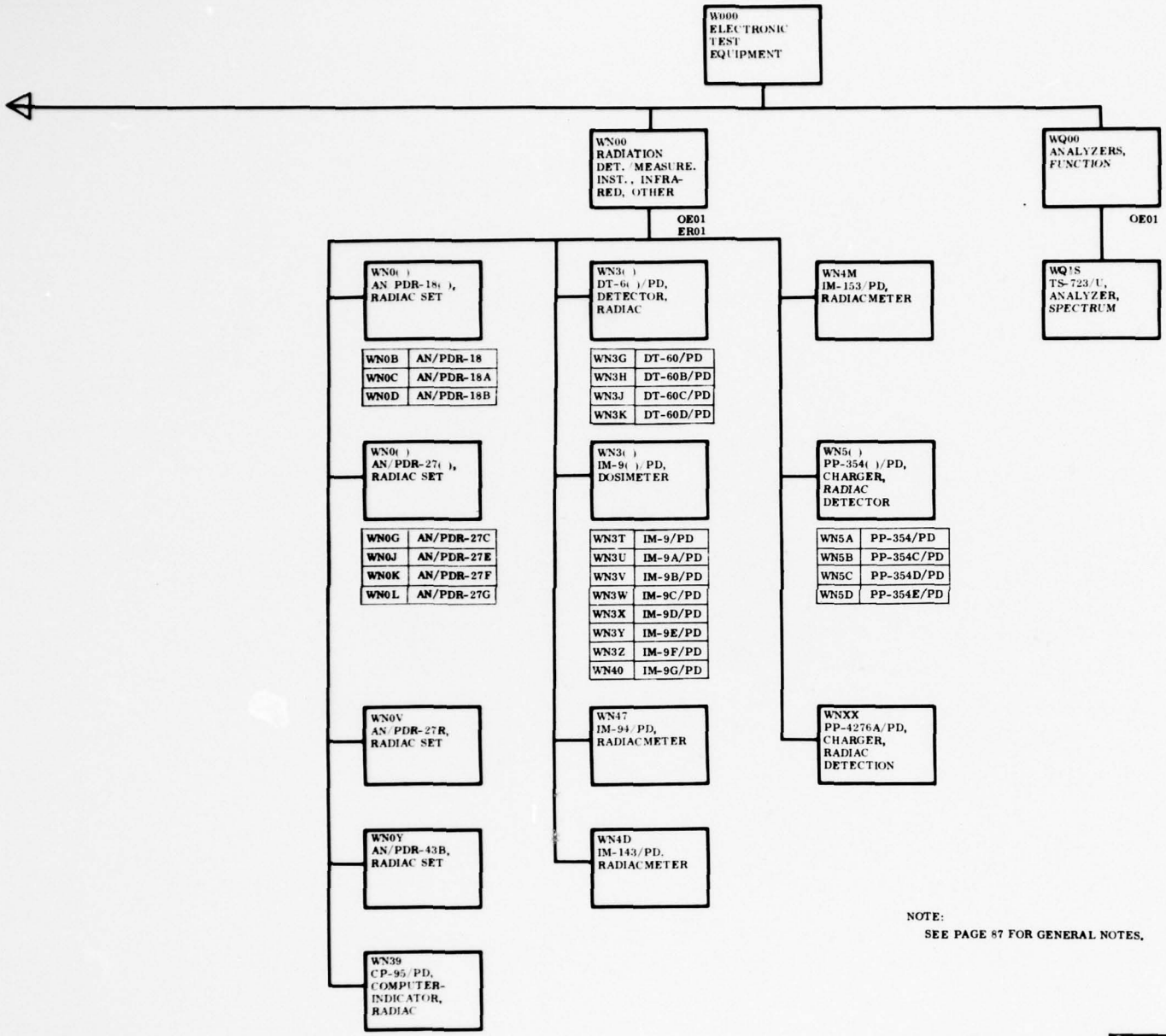
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

W000 ELECTRONIC TEST EQUIPMENT
WH00 - WK00



NOTE:

SEE PAGE 87 FOR GENERAL NOTES.

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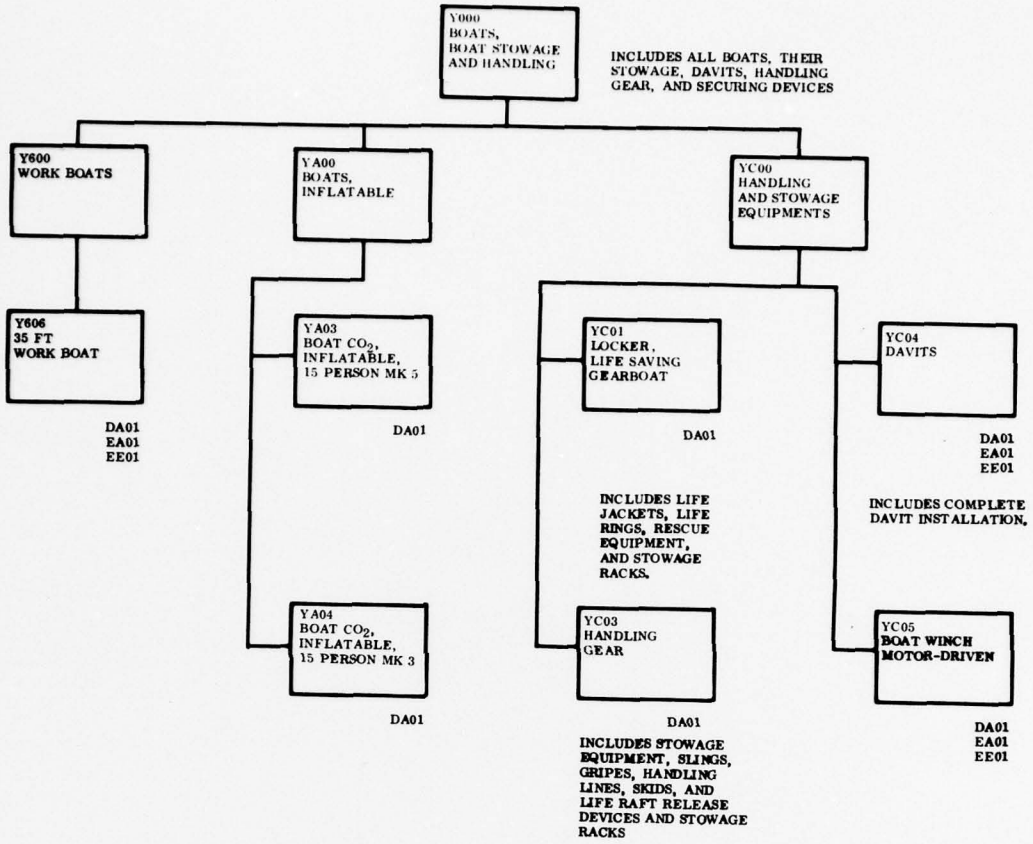
EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

W000 ELECTRONIC TEST EQUIPMENT
WN00 - WQ00



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EQUIPMENT IDENTIFICATION CODE
EIC SHIP SYSTEM DIAGRAM

Y000 BOATS, BOAT STOWAGE AND HANDLING
Y300 - YC00